

INDEX

Forty-fifth Quarto Volume—June 1, 1908, to December 31, 1908

AUTHORS

Acworth, W. M., 955
Allen, W. F., 499, 1475
Anderson, J. A., 992
Arnold, B. J., 435, 483, 799
Bailey, R. J., 1090, 1333
Ballard, W. E., 369
Bassett, E. M., 922
Beamer, A., 875
Beland, B. A., 30
Bee, C. B., 512
Bell, J. S., 176
Benjamin, C. H., 1451
Biddle, W. B., 198
Blanchard, J. M., 653
Boller & Hodge, 1389
Brady, J. E., 910
Brent, J. I., 700
Brislee, F. J., 173
Bronson, T. E., 32
Brown, W. C., 520
Bullock, S. A., 574
Burr, W. H., 1393
Bushell, A. M., 699
Carson, G. E., 59
Caruthers, C. H., 178, 384, 860
Church, J. P., 876
Clark, E. E., 1037
Converse, J. W., 1471
Crump, F. H., 573, 751
Cushing, W. C., 24
Daggett, Stuart, 750
Dalley, G. W., 1101
Dalby, H. A., 655
Daly, J. M., 923
DeKnight, E. W., 1613
Deming, Clarence, 513
Demoulin, Maurice, 1098
Dow, F. C., 1575
Dow, G. N., 135
Drake, W. A., 608
Dudley, C. B., 438
Dunn, H. A., 370
Dunning, S. W., 561
Durant, Aldrich, 99
Emerson, Harrington, 12, 511
Estep, H. C., 948
Ewing, A. J., 513
Fink, Henry, 487, 587, 627
Forman, H. W., 511, 748, 1386
Forsyth, William, 1245
Fowler, G. L., 1157
Fry, L. H., 1384
Fry, U. J., 431
Gibb, George, 1488, 1532
Gibbs, A. W., 323
Glenny, E. F., 496
Gothlin, O. P., 1241
Graeff, W. S., 464, 1185
Graeme, A. W. S., 526
Graves, A. C., 1543, 1598, 1629
Griffin, P. H., 167, 371, 1036
Griffith, E. M., 1338
Gunn, Richards & Co., 465
Gutierrez, R., 1524
Hale, Arthur, 999
Hall, W. L., 561
Harkness, W. E., 417
Hart, J. H., 624, 865
Heinle, A. W., 5
Hennessey, J. J., 1582
Hermany, A., 796
Hodgson, J. S., 1435
Hooven, A. E., 1430
Houlihan, P. H., 990
Howe, M. A., 611
Hudson, S. M., 21, 68
Huebner, G. G., 665
Hulbert, W. B., 1524
Humphrey, A. P., 1306
Hutchins, F. L., 10
Ingouf, R., 1242
Isaacs, J. D., 1339
Jacoby, H. S., 634, 700, 990
Jones, C. L., 868
Kauffman, F. E., 513
Kellogg, W. L., 847
Kohlsaat, C. C., 564
Lake, C. S., 185, 390
Lang, J. S., 918
Lane, F. K., 1039, 1197
Lawrence, G. C., 902
Loudon, A. C., 990
Luten, D. B., 1255
McCrea, James, 731
M'Daniel, H. W. E., 698, 942
McIntosh, William, 286
M'Veigh, E. J., 798
Mackie, J. F., 610
Maltby, F. B., 803
Meehan, M. J., 1575
Mellin, C. J., 1529, 1583
Merz, C. H., 1295, 1355, 1399, 1433,
1475, 1527, 1579
Minshall, T. H., 699
Moore, G. H., 656
Morcom, W., 940
Morgan, D. C., 1242
Morris, Ray, 1054
Moseley, E. A., 136
Muhlfeld, J. E., 70
Nay, F., 990
Newbern, R. H., 585
Nichols, William, 369, 896
Osborne, T. M., 1408
Pagan, W., 1137
Paley, W. B., 531, 1297, 1574
Pierce, H. J., 1257
Pomeroy, L. R., 760
Posterfield, J. F., 1383
Post, G. A., 277, 1062, 1306
Prall, W. M., 940
Prout, H. G., 1063
Quereau, C. H., 77
Randall, D. T., 620
Raymond, W. G., 653
Rice, N. M., 964
Rights, L. D., 990
Ripley, E. P., 591, 1255
Ripley, W. Z., 817, 857, 911, 951
Robinson, M. H., 1107, 1143, 1205,
1252
Rogers, R. H., 370
Rommel, C. G., 1491
Rooke, G. T., 561, 1573
Russell, W. B., 348
Ryder, W. W., 377
Saward, F. W., 607
Schaub, J. W., 1430
Schmidt, Wilhelm, 515, 566, 617, 940
Schoen, C. T., 165
Shelford, Frederick, 1007
Shelmerdine, P. B., 1051
Shonts, T. P., 1387
Sims, C. S., 35
Snow, J. P., 919
Stafford, B. E. D., 273
Stetson, E. E., 1471
Strobel, C. L., 698
Stucki, A., 920
Stumpf, J. E., 1303
Swacker, F. M., 415
Talcott, T. M. R., 5, 415, 749, 1525
Taussig, J. E., 1476
Taylor, R. V., 1137
Thompson, R. A., 562
Thomson, M'Leod, 1284
Thomson, T. K., 671, 703
Thornton, H. W., 547
Toltz, Max, 1037
Tratman, E. E. R., 1576
Wadleigh, F. R., 184, 379
Walker, H. T., 708, 768, 815, 1388
Walsh, J. R., 369
Wason, L. C., 444
Waterhouse, G. B., 478
Watson, H. A., 417
Webster, S. D., 544, 636, 683, 714
777, 879, 924, 972, 1021
Wedgwood, R. L., 807
Weissenbruch, Louis, 915
Wheaton, F. L., 715
Whinney, S., 463
White, G. C., 795
White, W. M., 561
Whitton, C. F., 191
Wickhorst, M. K., 867
Wild, M. B., 1574
Wilgus, W. J., 1150
Wilson, R. W., 578
Woods, E. S., 1037
Woodworth, R. B., 821
Wright, C. D., 1242
Wyles, G. W., 472
Yoakum, B. F., 491, 1207
York, J. E., 475

GENERAL INDEX

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

A

Abrasives (See Machine Tools)
 Abt Rack Locomotive, 480*
 Accidents:
 B. & O., Havre de Grace Bridge Collapse, 1070, 1210
 Belgian State Railroads, Contich, 677, 891†, 915*
 Berlin Elevated Collision, 1065
 Contributory Negligence, 1359
 Derailment of Tenders, 1379†
 Detroit & Mackinac, Wreck in Forest Fire, 1211
 France, near Limoges, 1656
 Govt. Bulletin No. 27, 570; No. 28, 1439
 Hedley Anti-Telescoping Device, 1486*
 Indiana Commission Causes and Remedies, 663
 Indiana Commission Orders Precautions, 823
 Indiana Comm. Statistics, 1601
 Indiana Convention on Railroad Accidents, 1407
 Int. Rap. Transit Collision, 1486*
 L. S. & M. S., Chesterton, 1405
 Loetschberg Tunnel Flood, 636
 London & N. W. Shrewsbury, 416†
 Louisiana Ry. & Nav., Grade Crossing Collision, 1406
 Mo. Pac., at Knobnoster, Mo., 491
 Monthly Summaries: May, 1908, 396; June, 1908, 525; July, 1908, 754; August, 1908, 950; September, 1908, 1283, 1383†; October, 1908, 1473
 N. O. & N. E., Little Woods, La., 1406
 N. Y. C. & H. R., Williamsbridge, 1453
 New York Central, Williamsbridge, cost, 878
 Northern Pacific, Young's Point, Mont., 1061
 Oklahoma, Reports to Commission Ordered, 1656
 Publicity, Harriman Lines, 1031†
 Sou. Pac. Bulletins, 492, 1031†
 Toledo & Ohio Central, Sugar Ridge, Ohio, 1109
 Union Pacific, Borie, Wyo., 1406, 1600
 Union Pacific, Near Hermosa Junction, Wyo., 1210
 W. B. & A., near Annapolis, 89
 Western Ohio Traction Collision, 724
 Y. & M. V., Grade Crossing Collision, 1406
 Accounting:
 Annual Reports to I. C. C., 1029†, 1040
 Borrowed Equipment, 370†
 Depreciation, 415†
 Disadvantages of I. C. C. Report Forms, 1179†
 Equipment Depreciation Charges, Protests to I. C. C., 1029†, 1050
 Hepburn Law and, 1543, 1598, 1620
 Operating Department Accounts Basis of Accounting Department Records, 751
 Railroad Cost Accounting, 21, 68
 Acetylene (See Lighting)
 Acme Machinery Co.:
 Hot Pressed Nut Machine, 1272*
 Africa:
 Central East African Roads, 723
 Extension of Railroads in German Africa, 1065
 Upper Congo Railroad Building, 803
 Air Brake (See Brake)
 Air-Brake Assn., Annual Convention, 436
 Ajax: Manufacturing Co., Bulldozer, 1507*
 Ajax Metal Co., Patent, Decision on Bearing Metal, 91
 Alaska Central:
 Unit Costs of Railroad Building, 743†, 764*
 Allis-Chalmers Co.:
 Gas Engines at Gary, 1207*
 Am. Assn. of Local Frt. Agts. Assns. Convention, 426
 Amer. Assn. of Ry. Telegraph Supts.:
 Quarterly Meetings, 994, 1657
 Am. Blower Co.:
 Draft Fans, Birmingham Ry., 114*
 Mill Heating Plant, 1369*
 Amer. Car & Equip. Co.:
 Shops at Chicago Heights, 1269*
 American Car & Foundry Co.:
 Ingoldsby Dump Car, 263*
 American Express Co., Massachusetts Business, 731
 American Locomotive Co.:
 Annual Report, 1088†
 Mallet Compound, B. & O., 1587*
 Mallet Compound, Cent. of Brazil, 1589*
 Mallet Compound, Erie, 1588*
 Pacific Type Locomotives, Paris-Orleans, 897*
 Prairie Locomotive, Wabash, 536*
 Steam Motor Car, Rock Island, 238*
 961*
 Study of Articulated Passenger Locomotive, 1586*

American Locomotive Co. (Continued):
 Ten-Wheel Locomotive, Southern Pacific, 944*
 American Monorail Company, 1407
 American Railroad Employees' and Investors' Association, 971, 986†
 American Railway Accounting Officers:
 Borrowed Equipment, 370†
 American Railway Association:
 April and Special Meeting, 375
 Car Efficiency Committee Bi-Weekly Reports, 59, 405, etc.
 Car Efficiency Report at Fall Meeting, 1448
 Committees, 375
 Cooperation with I. C. C., 1029†
 Equipment Depreciation Charges, Protests to I. C. C., 1029†, 1050
 Fall Meeting, 1410, 1446
 Field and Functions, 745
 Freight Car Balance and Performance in 1907, 496
 Overhead Conductors, 1447
 Rail Specifications, 443
 Standard Time, 1475
 Transportation of Explosives, 522, 1448
 Uniform Demurrage Rules, 1179†
 Amer. Ry. Bridge & Building Assn.:
 Convention, 1211, 1243
 Am. Ry. Engineering and Maint. of Way Assoc.:
 Committee on Electrification, 1493
 Proposed Supply Exhibit at Chicago, 986†
 Rail Committee Work, 175
 Rail Record Blanks, 1233†
 State Grade Crossing Laws, 1327†
 Am. Ry. Master Mechanics' Assoc.:
 Alloy Steel, 355
 Apprenticeship System, 312, 339†, 347
 Ball Joint Unions, 354
 Bequests to, 1061
 Blanks for Reporting Locomotive Repairs, 290, 297*
 Briquettes, 317, 323, 340†
 Castle Nuts, 312, 319*
 Convention, 412†
 Convention Exhibits, 121, 140, 331
 Convention Exhibits Abolished, 1423†
 Four-Cyl. Compounds, 344, 349*
 History, 275†
 Mallet Compounds, 316, 324
 Mechanical Stokers, 276†, 287, 297
 1909 Convention, 1369, 1453
 Revision of Standards, 343, 348
 Safety Valves, 343, 353
 Smoke Nuisance, 357
 Subjects for 1909, 354
 Superheating, 315, 321
 Track Exhibit, 308†
 Washing and Filling Boilers, 275†, 290, 296
 American Society for Testing Materials, Annual Meeting, 432
 Amer. Specialty Co., Drill Socket, 978*
 American Steel Foundries, Simplex Coupler, 293
 Amer. St. & Interurban Ry. Assn.:
 Convention, 784, 1180†
 Convention Exhibits, 1224
 American Tie Mill, 645*
 Amer. Tool Works Co.:
 High Speed Drill, 1319*
 Angle Bar (See Rail)
 Anglo-Newfoundland Development Co., Mill Heating Plant, 1369*
 Annual Reports (See also Corporation Names; also Accounting):
 Review of 1908 Reports, 1626*
 Arch (See Bridge)
 Argentina:
 Government-Owned Railways, 1524†
 Arica-La Paz Railroad, 1118
 Asbestos Protected Metal Co., Box Car Roof, 330*
 Ashes:
 Cost of Handling Locomotive Coal and Ashes, 191
 Ashton Valve Co.:
 Air Brake Gage, 259*
 Blow-Off Valve, 338*
 Gage Tester, 158*
 Locomotive Gage, 306*
 Pocket Gage, 115*
 Safety Valve, 303*
 Assn. of Amer. Ry. Accounting Officers:
 Committees, 543
 Association of Car Lighting Engineers, 93, 1442
 Assn. of Ry. Supts. of Bridges & Buildings (See Am. Ry. Bridge & Building Assn.)
 Assn. of Railway Telegraph Supts.:
 Convention, 431
 Assn. of Transportation & Car Accounting Officers Convention, 428*
 Aster Engineering Co., Universal Auto-Combiner Interlocking, 1199*

Atchison Topeka & Santa Fe:
 Annual Report, 1086†*
 Colorado Taxes, 1357
 Cost of Materials, 776
 Drovers' Car, 753* 950*
 Future of, 1255
 Locomotive Repairs, Cost of, 182*
 Mallet Compound, 1586*
 Oil Handling, 1443*
 Pass, with Biblical Injunctions, 1571†*
 Premium Systems, 413†
 Santa Fe Type Locomotive, 576*
 Shop Efficiency, 893†
 Shop System, 463†, 511†
 Signal Installations, 1169, 1564
 Surplus, 591
 System in Handling Material, 964*
 Wooden Cars, Reinforcing Light, 65*
 Atha Steel Casting Co., 116
 Atlanta & St. Andrews Bay Railroad, Passenger Coach, 1118*
 Atlanta, Birmingham & Atlantic:
 Concrete Work, 23*
 Auditing (See Accounting)
 Australia:
 Transcontinental Railroads, 1137†*
 Austrian State Railroads:
 Early Locomotive, 773*
 Petroleum Traffic, 1106
 Antofagasta & Bolivian, 1547, 1656
 Automatic Stops (See Safety Appliances)
 Automobiles:
 Railroad Crossings, 910
 Railroad Rivalry, 1465†
 Steam Omnibus in London, 1015
 Axle (See Bearings)

B

Baggage (See Passenger Rates)
 Baker-Pilliod Valve Gear, 302*
 Balance Sheet (See Accounting)
 Baldwin Locomotive Works:
 Compressed Air Mine Locomotive, 1402*
 Consolidation Loco., White Pass & Yukon, 755*
 Mallet Compound, Great Northern, 1585*
 Mallet Compound, Santa Fe, 1586*
 Mallet Compound for Santo Domingo, 1444*
 Mogul Locomotive, Iowa Central, 1058*
 Pacific Locomotives, Chicago & Alton, 1041*, 1244
 Prairie Loco., East Broad Top, 755*
 Santa Fe Type Locomotive, A. T. & S. F., 576*
 Smokebox Superheater, 1401, 1471†
 Switcher, Ill. Steel Co., 755*
 Ten-Wheel Locomotive, Southern Pacific, 944*
 Vauclain Compounds, C. M. & St. P., 1278†, 1574†
 Baltimore & Ohio:
 Annual Report, 1236†*
 Articulated Locomotive, 1587*
 Collapse of Havre de Grace Bridge, 1070, 1210
 Signal Blades Gilded, 1612
 Signal Performance, 1366
 Station at Wheeling, 942*
 Ten-Wheel Denmead Engine, 176*
 Washington Terminal, 1192
 Bangor & Aroostook:
 Unit Costs of Railroad Building, 846*
 Barber Truck, 55*
 Barney & Smith:
 Gondolas, C. B. & I. and C. C. C. & St. L., 265*
 Plant, 116*
 Bascule (See Bridge)
 Battery:
 History of the Storage Battery, 1198
 Bearings:
 Anti-Friction Side Bearings, 920*, 1037†
 Case-Hardening Locomotive, 162†
 Center Plate, Bush & McCormick, 362
 Journal Boxes for Passenger Cars, 223
 Journals on Standard Axles, M. C. B. Assoc. Discussion, 292
 Kensington Journal Box, 252*
 Roller-Bearing Center Plates, 164†, 171*
 Rymco Journal Box, 114*
 Side Bearings and Center Plates, M. C. B. Report, 228, 244†
 Symington Journal Boxes, 301
 Stucki Roller Side Bearing, 1567*
 Belgian State RRs.:
 Collision at Contich, 677, 891†, 915*
 Deficit, 1630
 Belt Dressing, Callahan, 1370
 Berlin Elevated Collision, 1065
 Berlin Subway Extension, 1352*
 Bessemer & Lake Erie:
 Steel Tie Experiences, 1398
 Bettendorf Axle Co.:
 Cast Steel Truck, 239
 Fifty-Ton Truck, 1194*
 Plant, 1171*

Bettendorf (Continued):
 Steel I 128
 Steel & Q. 79*, 1194*
 Steelframe & Trucks, 67*,
 Assembling Truck Frames,
 Bins, at Springfield, 1116*
 Block (See Signal, Block)
 Boiler (See also Locomotive Boiler):
 Explosions, from 1879 to 1907, 11
 Boiler Makers (See International Boiler Makers' Ass'n)
 Bolivia:
 Madeira & Mamore Railroad, 1051
 Railway Building, 1547, 1656
 Bolster, Gould Crown Truck, 885*
 Borneo, North, Railroad, 202
 Borsig Fireless Locomotive, 468*
 Borsig Rack Locomotive, 480*
 Boston & Albany:
 Punctuality on, 398
 Signal Orders, 883, 1267
 Boston & Maine:
 Annual Report, 1134†
 Earnings, 84†
 New England Railroad Situation, 513
 New Hampshire Politics, 725
 Signal Installations, 1612
 Stock Held by New Haven, 39, 363†, 378, 1545
 Boston Transit Commission:
 Washington Street Tunnel, 1435*
 Brady Brass Co.:
 Decision on Bearing Metal Patent, 91
 Brake (See also Safety Appliances):
 Air Brake Hose, M. C. B. Specifications, 236
 Barker's Hydraulic, 387*
 Brakeshoe, Armbrust, 120
 Brakeshoe, Ill. Mal. Iron Co., 128
 Brakeshoe Tests, 139, 142*, 376
 Buffalo Brake Head, 242*
 Continuous, Early Test in England, 178*, 384*, 699†
 Cylinder Packing Expander Ring, 1172*
 Efficiency in the Wreck at Shrewsbury, 416†
 Fulcrums, Damascus, 160
 Gage, Air Brake Testing, 259*
 London & North Western, Clark-Webb, 699†
 Motor Friction Brake, 1422*
 Sou. Pac. Air Brake Tests, 1466†, 1477*, 1538*, 1590*
 Steel & Innes, 384*
 Switching, Bush & McCormick, 362
 Westinghouse Vacuum and Automatic, 385*
 Bridge:
 Atchafalaya River, Southern Pacific, 661*
 Automatic Fire Alarms, 1493
 Bascule, Kinzie Street, C. & N. W., 1580*
 Blackwell's Island, 1377†, 1389*
 Chicago Terminal Transfer Track Elevation, 1052*
 Brooklyn, Automatic Block Signals, 806*
 Column Formulas and Lattice Bracing, 30
 Concrete Abutment, Atlanta, Birmingham & Atlantic, 23*
 Delaware River Viaduct, D. L. & W., 718*
 Erie, Guymard Cut-Off, 1293*
 Ferry Bridges, Central of N. J., 1288*
 French River, Canadian Pacific, 700†
 Galveston Trestle with Creosoted Piles, 1270*
 Gasolene Engine for Lift Bridge, 1371
 Havre de Grace Collapse, 1070, 1210
 Lake Pontchartrain, 700†
 Largest in the World, 634, 700†, 990†
 Manhattan Bridge, Cable Hauling on, 946*
 Manhattan Bridge Examination, 1602
 Manhattan, Track Franchises, 1361
 Maumee River, Ohio Electric Railway, 1255*
 Moving Loads on Concrete Bridges, 1255*
 Nile, at Khartoum, 891†
 Paulins Kill River Viaduct, D. L. & W., 718*
 Pneumatic Caissons, 671*, 703*
 Quebec, Test of a Model of, 1045*
 Scherzer Bascule Span at Cleveland, 36*
 Watertown Arsenal Tests, 1615†
 West African Government Railways Bridges, 1007*
 Williamsburgh, Signals, 691, 782
 Brill, J. G., Co.:
 High-Speed Truck, 330
 Prizes for Senior Theses, 1118
 British Railroads in 1907, 1622
 British Westinghouse Elec. & Mfg. Co.:
 Electric Motor Car, Midland Railway, 1004*
 Brooklyn Rapid Transit:
 Annual Report, 1085†, 1127
 Brooklyn Bridge Block Signals, 806*
 Connection and Tracks Over Manhattan Bridge, 1361
 Does City Transit Pay? 508†
 Brown & Sharpe Milling Machine, 112, 240*, 305*
 Brown Feed Water Heater, 1655*

Buda Foundry & Mfg. Co.:
 Motor Car, 1369*
 Ratchet Jack, 1370*
 Buffalo, Rochester & Pittsburgh:
 Annual Report, 843†*
 Buffalo Brake Beam Co.:
 Brake Head, 242*
 Bunker, E. A., Cloth for Car Roofing, 1462
 Bureau of American Manufacturers in Europe, 1270
 Burma Rys.:
 Hopper Ballast Car, 1140*
 Burner, Hauck Portable, 206*, 1463*
 Bush & McCormick Specialties, 362
 Business Situation (See also Finance; also Traffic):
 Cost of Materials, 776, 1647
 Fiscal Horoscope of the Railroads, 1233†
 Outlook for 1909, 1640
 Over-Capitalization, Over-Equipment, and the Panic, 893†
 Preparation for Renewed Business, 211†
 Railway Business Assn., 1062, 1110, 1132†, 1161, 1212, 1278†, 1307
 Statistics, First Half of Year, 730
 Trade Papers on 1909 Prospects, 1358

C

Cab Signal (See Signal)
 Calissons, Pneumatic, 671*, 703*
 California:
 Railway Commission Reorganization, 1599
 Callahan & Co., Geo., Preservative and Other Compounds, 1370
 Canada:
 Department of Railways, 1545
 Proposed Enlargement of Canadian Govt. R. R. System, 922
 Canadian Northern:
 History, 578
 Union Station at Winnipeg, Man., 180*
 Canadian Pacific:
 Automatic Fire Alarm for Bridges, 1493
 Conciliation Board, 615
 Electrification, 1493
 Separate Rail and Water Rates to Orient, 689, 1039, 1111, 1163, 1181†, 1495, 1549
 Strike, 724, 775, 922, 1015, 1109, 1159, 1210
 Canadian Railway Commission:
 Regulations for Canadian Railroads, 1149
 Work of, 1059
 Canals:
 Anthracite-Tidewater, 868*
 Delaware & Hudson, 868*
 Delaware Division, 870*
 Lehigh Coal & Navigation, 870*
 Morris Canal, 869*
 N. Y. Barge Canal Contracts, 1409
 Panama (See Panama Canal)
 Schuylkill, 871*
 Cananea, Yaqui River & Pacific, Wreck Crane for Bridge Construction, 837*
 Cape Government Railroads, 958
 Cars:
 Air Brake Instruction, Cent. of N. J. 397*
 Anti-Telescoping Device, 1486*
 Baggage, St. L. & S. F., 133*
 Bolster (See Bolster)
 Box, Bettendorf, 128
 Box, Steel End, 240*
 Built in 1908, 1616†
 Caboose, Steel Sub-Frame, A. T. & S. F., 65*
 Caboose Underframe, C. M. & St. P., 1142*
 Center Plate (See Bearings)
 Cleaner, Green Electric-Driven Vacuum, 1318*
 Cleaning Machine, 89*
 Clearances, 50†, 81*
 Coach, Atlanta & St. Andrews Bay, 1118*
 Coach, Hicks Standard, 1118*
 Coach, Sierra Leone Gov't Ry., 1010*
 Coach, Steel, Sou. Pac., 83*
 Coach, Steel, Penna. R. R., 251*
 Coal Mine Steel Cars, 783
 Corridor, South Indian Railway, 531*
 Crane (See Hoisting and Conveying)
 Depreciation (See Accounting)
 Derrick (See Hoisting and Conveying)
 Dining, C. & N. W. Lunch Car, 1100*
 Dining, Great Indian Peninsula, 758*
 Dining, Shanghai-Nankin, 522*
 Dirt, Canal Zone, 407
 Door (See Door)
 Drovers', A. T. & S. F., 752*, 950*
 Dump, Ingoldsby, 263*
 Dump, Oliver 20-yard Air, 873*
 Dump, Goossens Self-Clearing, 434*
 Dump, Washburn 6-yd., 550*
 Electric, Midland Railway, 1004*
 End Bracing for Gondola, 760*
 Flat, Panama Canal, 1023
 Gasolene (See Motor Car)
 General Service, Ralston, 302, 811*
 Gondola, Ches. & Ohio, 51†, 58*, 760*
 Gondola, C. B. & Q., 79*, 1194*
 Gondolas, C. B. & Q. and C. C. C. & St. L., 265*
 Gondola, Covered, Sierra Leone Gov't Ry., 1010*
 Gondola, Norfolk & Western, 51†, 52*

Cars (Continued):
 Gondola, Southern Mahratta, 994*
 Gondola, Ralston, 302
 Gondola, Virginian Railway, 51†, 61*
 Heating (See Heating)
 Hopper Ballast, Burma Railway, 1140*
 Inspection (See Motor Car)
 Jack (See Smoke Jack)
 Journal (See Bearings)
 Large Capacity, 1132†
 Lighting (See Lighting)
 Loading Long Material, 220
 Mail, St. L. & S. F., 133*
 Motor (See Motor Car)
 Officers', Shanghai-Nankin, 522*
 Ordered in 1908, 1617†, 1631
 Ore, Carnegie Steel Co., 1132†
 Ore, Chicago & North-Western, 82*
 Private, King Edward's, 1542*
 Rail Motor (See Motor Car)
 Refrigerator, Underframe, 203*
 Repairs, Abuse of M. C. B. Card, 1582
 Repairing Steel and Wooden, Cost of, Harriman Lines, 49†
 Repairs, Interchange, M. C. B. Rules, 225, 243†
 Saloon, London & North Western, 1542*
 Side Bearings (See Bearings)
 Side-Door, Int. Rap. Trans., 586, 1564
 Sleeping, Illinois Traction, 791†
 Sleeping, Shanghai-Nankin, 522*
 Steel Box, Bettendorf, 128
 Steel Coach, Penna. R. R., 251*
 Steel Coach, Southern Pacific, 83*
 Steel End for Box Cars, 240*
 Steel Freight, Lateral Bracing, 219
 Steel, Mail and Baggage, St. L. & S. F., 133*
 Steel Passenger, M. C. B. Report, 229*
 Steel, Repairing, 49†, 59
 Stock, 30-ton Steel Underframe, 67*, 172*, 1142*
 Subway, Berlin, 1352*
 Tank, M. C. B. Assoc. Report, 255
 Truck (See Truck)
 Underframe for Refrigerator, 203*
 Underframe, Steel, Reinforcement for Wooden Cars, 65*
 Ventilation (See Ventilation)
 Weed Killing, 1570*
 Wheel (See Wheel)
 Wrecking Crane (See Hoisting and Conveying)
 Cars, Freight:
 A. T. & S. F., Caboose Underframe, 65*
 Bettendorf, Steel Box, 128
 Burma Railway, Hopper Ballast, 1140*
 Carnegie Steel Co., Ore, 1132†
 Ches. & Ohio, Gondola, 51†, 56*, 760*
 C. & N. W., Steel Ore, 82*
 C. B. & Q., Gondola, 79*, 265*, 1194*
 C. C. C. & St. L., Gondola, 265*
 C. M. & St. P., Caboose Underframe, 1142*
 C. M. & St. P., Stock Car, 67*, 172*, 1142*
 Comparative Summary of Cars in Service, 5†, 52†, 369†
 Ingoldsby Dump, 263*
 Light Freight Cars, Disposition of, 50†
 Marking, M. C. B. Standard, 223*
 Merchants' Despatch, Refrigerator, Underframe, 203*
 Norfolk & Western, Gondola, 51†, 52*
 Old, Disappearance of, 52†
 Oliver Air Dump Car, 873*
 Panama Canal, Flat, 1023
 Prussian St. R. R. Dump, 434*
 Ralston General Service and Gondolas, 302, 811*
 Repairs, Reducing, 684
 Sierra Leone Gov't Ry., Covered Gondola, 1010*
 Southern Mahratta, Gondola, 994*
 Steel, Lateral Bracing, 219
 Virginian Railway, Gondola, 51†, 61*
 Car, Passenger:
 A. T. & S. F., Drovers', 752*, 950*
 Atlanta & St. Andrews Bay, Coach, 1118*
 Berlin Subway, 1352*
 C. & N. W., Lunch Car, 1100*
 Great Indian Peninsula, Dining, 758*
 Hicks Standard, 1118*
 Illinois Traction, Sleeping, 791†
 Int. Rap. Trans., Side Door, 586, 1564
 Linen Covers on Chairs, Louisiana, 841†
 L. & N. W., King Edward's Private Car, 1542*
 Midland Railway, Electric, 1004*
 Penna. R. R., Steel Coach, 251*
 St. L. & S. F., Steel Mail and Baggage, 133*
 Shanghai-Nankin Equipment, 522*
 Sierra Leone Gov't Ry., Coaches, 1010*
 Sou. Pac., Steel Passenger Coach, 83*
 South Indian Railway, 531*
 Steel, M. C. B. Report, 229*
 Weight of, 1317
 Car Accountants (See Assoc. of Trans. and Car Accounting Officers)
 Car Ferry (See Ship)
 Car Lighting Engineers (See Assoc. of Car Lighting Engineers)
 Car Service (See also Freight Claim Assoc.; also Assoc. of Transportation and Car Accounting Officers; also Interstate Commerce Commission Rulings):

GENERAL INDEX—Continued.

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Cars Service (*Continued*):
 Am. Ry. Assoc. Recommendations, 1446
 Arkansas, Baker Demurrage Law, 452
 Average Freight Car Movement, 1327†
 Car Efficiency, Am. Ry. Assoc. Report, 1448
 Carding of Cars, 1303
 Coal Car Distribution, I. C. C., 38, 193, 448, 984†, 1066, 1109
 Comparative Summary of Cars in Service, 389†
 Cotton Compress and Demurrage, 1264
 Car Diversion, Salt Lake City Roads, 1018
 Comparative Summary of Cars in Service in U. S., 5†
 Comparison of Cars Handled by Associations, 199
 Demurrage, 1234†
 Demurrage and Storage Rules of Southeastern Roads, 91
 Demurrage Bureaus in Ohio, 1411, 1431†
 Demurrage, I. C. C. and Private Car Lines, 1029†, 1090†, 1131†, 1241†, 1833†
 Demurrage on the New Haven, 1233†
 Demurrage Rates in New York City, I. C. C. Decision, 507†, 529, 545
 Five Years of Regulation by the States, 665
 Freight Car Balance and Performance in 1907, 496
 Hay Traffic in New York City, 529
 Idle Freight Cars, 603†
 Joint Interchange and Inspection Bureaus, 658, 940†
 Per Diem and Standard Prices, 98†
 Per Diem, Reducing, 10
 Progress Toward Car Efficiency, 999
 Shortage Possible, 892†
 States as Regulators of Freight Car Service and Demurrage, 1197
 Surpluses and Shortages, Am. Ry. Assoc. Bi-weekly Reports, 59, 405, etc.
 Switching Charges, Illinois, 1018, 1310
 Uniform Demurrage Rules, 1179†
 Car Shortage (See Car Service)
 Car Unloader, Hewlett, 60
 Car Unloaders, 802
 Cardwell Testing Machine, 104*
 Cardwell Tests of Draft Gear, 274
 Care Roofing, 113
 Carnegie Steel Co.:
 Large Ore Cars, 1132†
 Piling, Steel Sheet, for Pipe Line Trench, 430*
 Schoen Steel Wheel Plant Purchase, 500, 550
 Steel Piling, 821*
 Steel Ties, Bessemer & Lake Erie, 1398
 Case Mfg. Co.:
 Coal and Ash Handling Gantry, 833*
 Cattle:
 Live Stock Transportation Law, Violations, 38, 1159, 1261, 1453
 Stock Claims, 1396
 Cement (See Concrete)
 Cement, Steam Joint, 1370
 Centenary of Railroad Travel, 1297*, 1574†
 Center Plate (See Bearings)
 Central East African Railroad, 723
 Central of Brazil:
 Electrification, 1070
 Mallet Compound Locomotive, 1589*
 Central of Georgia, Annual Report, 939†*
 Central of New Jersey:
 Air Brake Instruction Car, 397*
 Manhattan Terminal, 1288*
 Central of Peru, Electrification, 1320
 Central Vermont Transportation Co., 1411
 Champion Forge, 274*
 Chefoo-Weihsien Railway, 1554
 Chesapeake & Ohio:
 Annual Report, 1033†*
 Coal Cars, 51*, 56*, 760*
 Consolidation Locomotive, 627*
 Chicago & Alton:
 Instruction of Employees, 616, 744†, 990†
 Pacific Locomotives, 1041†, 1244
 Standard Oil Decision, 594, 605†, 1360
 Chicago & Milwaukee Electric, 1357
 Chicago & North-Western:
 Annual Report, 1330†*
 Bridge Interlocking, 1069
 Committee Report on Discipline, 983†, 998
 Kinzie Street Bascule Bridge, 1580*
 Lunch Car, 1100*
 Passenger Station at Chicago, 711*
 Signal Orders, 927, 1069, 1267, 1503
 Steel Ore Car, 82*
 Train Despatching by Telephone, 1101
 Young Rotary Valve and Gear, 1342*
 Chicago, Burlington & Quincy:
 Annual Report, 1468†*
 Fire in Chicago, 685
 Gondola, 79*, 265*, 1194*
 Safety Stop Device, 572
 Signal Orders, 927
 Train Despatching by Telephone, 363†, 377, 464†, 572
 Unit Costs, Relaying Track, 1387
 Chicago Great Western:
 Signal Orders, 1459
 Stock Yards \$2 Rate Case, 459†, 470
 Chicago, Indianapolis & Louisville:
 Transportation for Advertising, 542, 557†, 564
 Chicago, Milwaukee & St. Paul:
 Annual Report, 1331†*
 Brown Feed Water Heater, 1655*
 Caboose Car Underframe, 1142*
 Cast Iron Wheels, 1517†
 Freight Car Work at West Milwaukee Shops, 1142*
 Pacific Extension, 1095*, 1243
 St. Paul Pass Tunnel, 1096*
 Stock Car, 67*, 172*, 1142*
 Smyth Camp Embankment, 656*
 Vauclain Compounds, 1278†, 1574†
 Chicago Pneumatic Tool Co.:
 Semi-Annual Report, 837
 Plant, 1222*
 Chicago, Rock Island & Pacific:
 Annual Report, 1280†*, 1323
 Cost of Materials, 776
 Galveston Terminals, 995*
 Motor Car Service, 1405
 Reclaiming the Desert, 447
 Signals Installed, 927
 Signal Orders, 1366, 1415, 1503
 Steam Motor Car, 238*, 961*
 Chicago St. Rys., Average Application of Revenues, 1262
 Chicago Terminal Transfer, Track Elevation, 1052*
 Childs, O. J. Co.:
 Fire Extinguisher, 43*
 Chile:
 Railroad Construction, 1118
 China:
 Chefoo-Weihsien Railway, 1554
 Railroad Building, 1598
 Railroads of, 1044
 Chinese Eastern Railroad, 1327†
 Cibulas Car Ventilating Device, 66*
 Cincinnati Planer Co., Heavy Forge Planer, 64*
 Claims:
 Advice to Shippers Concerning Freight Claims, 1363
 Causes and Sources of, 544, 636, 683, 714, 777, 791†, 879, 924, 972, 1021
 Damage Suits in Texas, 1656
 Freight, St. Louis, 727
 Small Shipper and the Railroad, 1136†
 Stock Claims, Fire Claims and Injuries to Track Employees, 1396
 Waivers of Damage Rights Illegal, 1600
 Clark Boiler Cleaner, 156, 551*
 Clausen, L. R., 1191*
 Cleaning, Thurman Systems, 268
 Clear Spring Steel Coal Co.:
 Coal Mine Steel Cars, 783
 Cleveland, Akron & Columbus Signal Orders, 1315
 Cleveland, Cincinnati, Chicago & St. Louis:
 Beech Grove Shops, 1245*
 Gondola, 265*
 Strike, 878, 1015
 Cleveland Crane & Car Co.:
 Grab Bucket Mono-Rail Crane, 783*
 Cleveland Street Railway (See Municipal Traction Co.)
 Coal (See also Freight Rates; also Smoke):
 Anthracite-Tidewater Canals, 868*
 Briquettes in Railroad and Other Service, 184, 379
 Briquettes, M. M., Assoc. Report, 317, 323, 340†
 Briquettes on Southern Railways, 346
 Commodities Clause (See Interstate Commerce Law)
 Cost of Handling Locomotive Coal and Ashes, 191
 Fuel Values, 620
 German Production, 1655
 Gravity Measuring Coal Chute, 518*
 Louisville & Nashville Coal Chutes, 848*
 Novel Philadelphia Coaling Plant, 1023
 Portable Coal Storage Machine, 541*
 Reinforced Concrete Coaling Plant, 719*
 Traveling Engineer's Duties, 852
 College (See Names)
 Columbina, Railroad Building in, 83
 Colorado & Southern:
 Annual Report, 1183†*, 1229
 Galveston Terminals, 955*
 Competition, Enforced Railroad, 1054
 Compressed Air:
 Gasoline Driven Portable Compressor Plant, 40*
 Concrete, Reinforced:
 Atlanta, Birmingham & Atlantic Work, 23*
 Corrugated Reinforcing Bars, 1172*
 Hy-Rib Sheathing, 836*
 Locomotive Coaling Station, 719*
 Metal and Wooden Forms in Construction, 444
 Piling, Atlantic City Boardwalk, 99*
 Test of Large Beams, 621*
 Stone Bins and Trestle, 1116*
 Connecticut:
 Campaign of Railroad Education, 1329†
 Connecticut R. R. Commission, Politics, 984†
 Consolidated Car Heating Co.:
 Electric Heater Decision, 1463
 Train Pipe End Valve, 1368*
 Vapor System, 112*
 Consolidated Steamship Company, 1262, 1493
 Construction, New:
 C. M. & St. P. Smyth Camp Embankment, 656*
 Cost of Labor, 8
 Double Tracking, Northern Pacific, 1244
 Erie, Guymar Cut-Off, 1292*
 Hill on the Future of the Northwest, 1414
 Hydraulic Filling, 656*
 Outlook for 1909, 1643
 Pacific Extension, C. M. & St. Paul, 1095*, 1243
 Railroad Built in 1908, 1616†, 1624
 Slateford-Hopatcong Cut-Off, D. L. & W. 715*
 Unit Costs of Railroad Building, 713*
 764*, 846*, 991*, 1387
 Western Pacific, 891†, 902*
 Wet Excavation for Sewer, 1012*
 Control (See Finance; also Gov. Regulation of Railroads)
 Conventions (See names of associations)
 Conveying Machinery (See Hoisting and Conveying)
 Cooling (See Refrigeration; also Ventilation)
 Cost (See Business Situation; also Construction, New)
 Coupler (See Draft Gear)
 Coupling (See also Hose):
 Automatic Connectors, 212†
 Crampton Engines, 768*
 Crane (See Hoisting and Conveying)
 Credit (See Finance)
 Creosote (See Ties and Timber)
 Crocker-Wheeler Co.:
 Cable Hauling on Manhattan Bridge, 946*
 Motor Drive Economy, 269*
 Crops (See Grain)
 Crossing (See Rail; also Highway Crossing)
 Cumberland Valley R. R.:
 Early Locomotive, 771*
 Cupola, Whiting Foundry, 1318*
 Curtain Fixtures, 160*, 1318*
 Curve (See Maintenance of Way.)
 Cutler-Hammer Clutch Co.:
 Lifting Magnets, 43
D
 Daly's Equated Tonnage Computer, 767*
 Damages (See Claims)
 Damascus Brake Fulcrums, 160
 Daniels, George H., 444*
 Darley Suction Conveyor, 1569*
 Davis-Bournonville Co.:
 Oxy-Acetylene Welding and Cutting, 265, 967*
 Dearborn Drug & Chemical Works, Plant, 239*
 Delaware & Hudson:
 Signaling Plans, 1612
 Delaware, Lackawanna & Western:
 Scranton Passenger Station, 1335*
 Signal Order, 597
 Slateford-Hopatcong Cut-Off, 715*
 Track Superstructure in Tunnels, 1277†, 1304*
 Demurrage (See Car Service)
 Denmead Ten-Wheel Freight Engine, 176*
 Denver & Rio Grande:
 Annual Report, 1239†*
 Depreciation of Equipment (See Accounting)
 Derrick (See Hoisting and Conveying)
 Detroit & Mackinac:
 Unit Costs of Railroad Building, 991*
 Wreck in Forest Fire, 1211
 Detroit Lubricator Co.:
 Sight Feed Air Cylinder Lubricator, 1220*
 Diamond Steel Pole, 1422
 Dickinson Caboose Jack, 832*
 Differentials (See Freight Rates)
 Discipline (See Employee)
 Disinfectant, Zenoleum Sprayer, 259*
 Door:
 Box Car, M. C. B. Assoc. Report, 257*
 Ritter Folding, 303*
 Trap, All-Steel, 1668*
 Draft (See also Ventilation):
 Steam Fan Regulator, 1507*
 Draft Gear:
 Broken Coupler Parts, Replacing, 49†
 Buffing Shocks, 558†
 Bush & McCormick Friction, 362
 Cardwell Tests, 274
 Coupler Tests, 143*, 216
 Excel Coupler, 219
 Friction; Practical Results, 359†
 Janney Coupler, 264
 Simplex Coupler, 293
 Steel Underframe Stock Car, 172*

RAILROAD AGE GAZETTE—Index.

Draft Gear (*Continued*):
 Tests of Friction Draft Gear for the Erie, 993
 Tests of Friction Gear, 130†, 148*, 557†
 Uncoupling Device, 88*
 Drafting, Noyes T Square and Drafting Instrument, 930*
 Drawbridge (See Bridge)
 Dredge:
 Panama Canal Equipment, 803
 Drill (See Machine Tools)
 Duff Mfg. Co.:
 Ball Bearing Geared Jack, 1220*
 Dynamite (See Explosives)

E

Earl's Court Exhibition, 1406
 Earnings (See also Annual Reports; also names of companies):
 Cost of Materials, 776
 Gross Earnings Defined in Minnesota, 1557
 Per mile, 1906 and 1901, 51
 Reports to I. C. C.; General News Section, Weekly.
 Texas Railroads, 106, 877, 881
 Train Mileage and Passenger Revenues, 1328†*
 East Broad Top Railroad & Coal Co., Prairie Type Locomotive, 755*
 Eastern Ry. of France:
 Locomotives, 185*, 390*
 Profiles of Main Lines, 394*
 Economy:
 Preventable Wastes and Losses, 12*
 Ecuador, New Railroad in, 1409
 Education (See also names of schools, colleges and universities):
 Harvard School of Business, 878
 How to Make Good Machinists, 650†
 Edwards, O. M., Co.:
 All-Steel Trap Door, 1668*
 Election Returns on Trains, 1307
 Elec. Controller & Mfg. Co.:
 Lifting Magnet, 1507*
 Elec. Controller & Supply Co., Patent Decision, 734
 Electric Motor (See Motor)
 Electric Railways (See also Electrified Steam Railroads):
 Average Application of Revenues, 1282
 Does City Transit Pay? 508†
 Flat Wheels, New York City Ordinance, 1545
 Govt. Regulation, Earnings and Rates, 459†
 Massachusetts Trolley Holdings, 363†, 378
 World Mileage of Single-Phase Roads, 1404
 Electric Traction (See also Locomotive, Electric):
 Location of Overhead Conductors, 1447
 N. Y. Central Multiple Unit Train Service, 77
 Electrified Steam Railroads:
 Canadian Pacific, 1493
 Central Brazil, 1070
 Central R. R. of Peru, 1320
 Erie Suburban Lines, 1159
 European Plans, 697†, 713
 German Railroads, 407*
 Illinois Central at Chicago, 985†, 1160, 1186, 1262
 M. of W. Assoc. Committee, 1493
 Melbourne Suburban Lines, 972, 1295*, 1355*, 1399*, 1433*, 1474*, 1527, 1579*
 Midland Railway, 1001*
 New Haven's Overhead Contact Line Construction, 1179†
 Penna. R. R. Contract, 1320
 Pennsylvania, Direct Current, 1564
 St. Clair Tunnel, 1305*, 1308, 1346*
 Southern Pacific, 1453
 Swedish State Railroads, 551
 Elliot Flange Lubricator, 608†*
 Ellis Automatic Track Inspector, 501
 Emerson Steam Pump Co., Pumps for Wet Excavation, 1012*
 Emmert Mfg. Co.:
 Grinding Machine, 1117*
 Noyes T Square and Drafting Instrument, 930*
 Employee (See also Education):
 Altoona Railroad Club, 93
 American Railroad Employees' and Investors' Association, 971, 986†
 Apprentice System, M. M. Convention Exhibit, 131
 Apprenticeship System, M. M. Assoc. Report, 312, 339†, 347
 Collectors on Trains, Sou. Pac., 1015
 Compensation for Injuries, 824
 Co-operation, Railroads and Employees, 1207
 Courtesy, Value of, 513†
 Discipline:
 Chicago & North Western Committee Report, 983†, 998
 D. L. & W., 725
 Pennsylvania Railroad Bulletins, 685
 Surprise Tests, Penna. R. R., 1210
 Surprise Tests, Sou. Pac., 492, 1031†
 Efficiency in 1908, 1644
 Efficiency of Railroad Shop Labor, 129†

Employee (*Continued*):
 Enginemen, Training in France, 793†
 Examination of Train and Station Employees, 616, 744†, 990†
 First Aid, Penna. R. R., 775
 Full-Crew Law, Arkansas, 85
 Full-Crew Law, Massachusetts, 1212
 Full-Crew Law Nullified, Texas, 1600
 Government Mediation in Railroad Labor Disputes, 1193
 Hours of Labor:
 C. R. I. & P. Telegraphers, 685, 775, 823
 Erie, 1656
 German Railroads, 774
 Hours of Telegraphers in Emergencies, 1016
 Injunction Asked Against Law, 636
 Missouri, 193
 Wisconsin, 398, 1061
 Increase of Time, St. Louis & San Francisco, 684
 Injuries to Track Employees, 1396
 Instruction, on Chicago & Alton and Toledo, St. Louis & Western, 616, 744†, 990†
 Job Insurance, 1153
 Labor Question on the Railroads, 881†
 Machinist Apprentices, 650†
 Maint. of Way Department, 1576
 Mexican Immigration, 1599
 Nebraska Protective Assoc., 698†*, 942†, 969
 Nebraska, Protest Against Rate Reduction, 161†, 205
 Overwork in England, 11
 Pay Semi-Monthly, New York, 1109
 Pension, Third Avenue Railroad, 724
 Piece Work and Day Rate, 608†
 Piece-Work Results, 696†, 700
 Premium Plan vs. Piece Work, 465†
 Premium System on the Santa Fe, 413†
 Public Relations of Wurtemburg Employees, 509†
 Reduction of Time, B. & O., 635, 1359
 Station Agent and the Public, 923
 Strike:
 Canadian Pacific, 724, 775, 922, 1015, 1109, 1159, 1210
 Canadian Pacific, Conciliation Board, 615
 C. C. & St. L., 878, 1015
 Damages to P. C. C. & St. L. for 1894 Strike, 1453, 1545
 Iowa Central, 726, 1162
 Limitations of the Right to Strike, 1572†
 Missouri Pacific, 86
 Penna. R. R. Strike Averted, 1547
 Taking Chances, 370†
 Ticket Agent, 842†, 845†, 896†
 Trade Unions:
 Canadian Brotherhood of Railway Employees, 1405
 German, 923
 Labor Conditions in San Francisco, 1907
 Wages:
 Fares and Wages in England, 1261
 Germany, 1400, 1625
 Payment on Tonnage Basis, 1476
 Wage Increases:
 C. R. I. & P., 684
 Missouri Pacific, 1359
 Mobile & Ohio, Salaries, 445
 Southern Ry., Salaries, 491
 Wage Reductions:
 Federal Threat, 1466†
 M. K. & T., 724, 1656
 Waivers of Damage Rights Illegal, 1600
 Y. M. C. A., Pennsylvania Railroad, 542
 Engine (See also Locomotive):
 Gas Engines at Gary, 1207†
 Gasoline Engine for Lift Bridge, 1371
 Producer Gas Power Plant, Minn. & St. Louis, 935†, 948*, 1037†
 Ridgway Side Crank, 1505*
 Engineering and Maint. of Way Assoc. (See Am. Ry. Eng. and Maint. of Way Assoc.)
 England (See names of railroads; also British):
 Erie Railroad:
 Annual Report, 1381†
 Commutation Tickets, 1546
 Cost of Labor, Erie and Jersey, 8
 Electrification of Suburban Lines, 1159
 Guyard Cut-Off, 1292*
 Friction Draft Gear Tests, 993
 Mallet Compound, 1588*
 Signal Contracts, 201, 927, 1267
 Signals on Guyard Cut-Off, 1416*
 Excavation (See Construction, New)
 Expanded Metal & Corrugated Bar Co., Corrugated Reinforcing Bars, 1172*
 Explosives:
 Transportation, Federal Law, 395, 522
 Transportation of Explosives, Am. Ry. Assoc. Rules, 1448
 Express (See also names of companies; also Interstate Commerce Commission Rulings):
 Increased Rates to Pacific Coast, 1455
 Massachusetts Business, 731
 Massachusetts Express Rates, 1363, 1556
 Oklahoma Rates Ordered Reduced, 1604
 Rates Increased, Chicago to Milwaukee, 824
 Wells Fargo Coast Rates, 1557, 1603
 Fagan, J. O., 1657
 Fairbanks, Morse & Co.:
 Gasoline Engine for Lift Bridge, 1371
 Suction Gas Producer Plant, 1221*
 Fall River Line Steamer Commonwealth, 447
 Falls Hollow Staybolt Co.:
 Boiler of Paris-Orleans Locomotive, 300*
 Staybolt, Tests, 503
 Fare (See Passenger Rates)
 Fast Trains and Runs:
 Locomotive and Other One-Mile Records, 1378†, 1431†
 Fay & Egan:
 Car Mortiser, 89*, 259*
 Combined Rip and Resaw, 736*
 Double Circular Saw, 205*
 Four-Side Molder, 304*
 Planer, 159*
 Straining Device for Band Saws, 242*
 Federal Jurisdiction (See Gov't Regulation; also Legal Decisions)
 Federal and the Railroads, 1466†
 Ferry (See Ship)
 Finance (See also Accounting):
 Capital, New, in 1908, 1084
 Capitalization and Profits, 365†
 Changes in Ownership and Control, 1908, 1623
 Convertible Railway Bonds, 1518†
 Diffusion of Stock Ownership, 791†
 Dividend Changes in 1908, 1634
 Enforced Railroad Competition, 1054
 Fiscal Horoscope of the Railroads, 1233†
 Future of Railroad Investment, 650†
 Government Regulation of R. R. Securities, 461†
 Number of Railway and Industrial Shareholders, 1548
 Over-Capitalization, 487
 Over-Capitalization, Over-Equipment and the Panic, 893†
 Poor's Manual for 1908, 375
 Receiverships and Foreclosures in 1908, 1618†
 Stock Distribution, 161†
 Voting Stockholders' Rights, 1602
 Fire (See also Explosives):
 Automatic Alarm for Bridges, 1493
 Chicago Property of C. B. & Q. Burned, 685
 Det. & Mac. Wreck in Forest Fire, 1211
 Fire Claims, 1396
 Fire Fighting Equipment for Tugboats, 585*
 Forest, 1160, 1338, 1548
 Locomotive Equipment for Fire Protection, 776
 Firebox (See Locomotive Firebox)
 Fire Extinguisher, Utica, 43*
 Fireman (See Employee)
 First Aid (See Employee)
 Fitzgerald Automatic Gate & Signal Co., Automatic Highway Crossing Gate, 836
 Flange (See Wheel)
 Flannery Bolt Co., 267*
 Foreclosures in 1908, 1618†
 Forest Preservation:
 Canadian Pacific, 85
 Fires (See Fire)
 Mexican Central, Eucalyptus, 1015
 Penna. R. R. Nursery, 544, 1546
 U. S. Forestry Experiment Station, 1017
 Forge:
 Champion, 274*
 Hauck Portable Burner, 206*, 1463*
 Formosan Railroad, 1288
 Forney, M. N., 98†
 Foundation (See Bridge)
 Fox Tube and Pipe Cutter, 1670*
 Freight (See also Car Service):
 Bonded, Fine for Non-Delivery to Customers, 777
 Claims (See Claims)
 Classification, Advances in Minimum Weights, 882, 1030†
 Clean Bill of Lading, 1214
 Consignee's Name on Each Consignment, 1310, 1361
 Co-operation with Shippers at St. Louis, 498
 Delivery on Bonds of Indemnity, Texas, 1018
 Freight Problem on Manhattan Island, 1257
 Handling Astray Freight, 653†
 Harbor Allowances by New York Trunk Line, 1496
 Marking Company's Freight on the Burlington, 404
 Marking L. C. L. Freight, 557†, 593
 N. Y. N. H. & H. and New York Connections, 879, 1111
 Package Car, M. K. & T., 1549
 Rates (See Freight Rates)
 Simplifying Office Work, 496
 Tracing L. C. L. Freight, 563†
 Uniform Bill of Lading, 194, 539, 780, 1166, 1264, 1279†, 1603
 Western Classification Changes, 826
 Freight Claim Assn., Annual Meeting, 467
 Freight House (See Station)
 Freight Rates (See also Freight Rate Reduction; also Freight Rate Increases; also Interstate Commerce Commission Rulings):

GENERAL INDEX—Continued.

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Freight Rates (Continued):
 Adjusting Rates to Conditions, 364†
 Enforced Railroad Competition, 1054
 Five Years of Regulation by the States, 665
 Illegal, A. T. & S. F., 727
 Illegal, Chesapeake & Ohio, 86, 1549
 Illegal, Chicago & Alton, Standard Oil, 594, 605†, 1360
 Illegal, Illinois Terminal Ry., 973
 Illegal, Lehigh Valley, 448
 Illegal, N. Y. C. & St. L., 448
 Illegal, Penna, R. R., 1495
 Illegal, Pere Marquette, 1549
 Illegal, St. L. I. M. & S., 1603
 Illegal, Southern Pacific, 39, 448
 Illegal, Standard Oil, 193, 594, 605†, 1360
 Illegal, Union Pac., Coal, 1546
 Lawyer's View of Rate Litigation, 1306
 Mexico, Coal, 1163
 Michigan Minimum Rate per Car Law Valid, 1018
 Missouri River Jobbers' Case, 938†, 1018, 1214, 1313, 1364
 Northwestern Lumber Cases, 508†, 545, 640, 824, 1112, 1213, 1263
 Rates Too Low Before Panic, 559†
 Readjustment in the West, 795†
 Reasonable Rates, 649†, 653†, 750†
 Relation to Commodity Costs, 35
 Responsibility in Quotations, 416†, 512†
 Separate Rail and Water Rates to Orient, 193, 689, 1039, 1111, 1163, 1181†, 1495, 1549
 Shippers' Responsibility for Legal Rates, 1519†
 Single Tariff, Rock Island and Frisco, 1662
 Switching Charges, Chicago, 1361
 Terminal Charges, Chicago, 88, 493, 636
 Terminal Charges, Sugar, New York and Philadelphia, 1066
 Theory of Railroad Rates, 817*, 857, 911*, 951*, 1137, 1242†
 Theory of Rate Regulation, 1465†
 Transcontinental Freight Tariffs, 1603
 Uniform Classification Committee, 39, 87, 545

Freight Rates Increased (See also Interstate Commerce Commission Rulings):
 Alabama, 778
 Apples from Pacific Northwest, 879
 Arkansas, 926, 973, 1163, 1214, 1309
 Baltimore and Philadelphia to West, 1495
 Brown, W. C., on, 507†, 520
 Chicago Shippers' Committee, 1553
 Cottonseed Products, Ill. Cent. and L. & N., 1163
 Cream, Proposed, 196
 Criterions for Rates, 1423†
 Effect on General Business, 561†
 Effect on Commodity Prices, 369†
 Freight Rates and the Commission, 607†
 General Advance, 638
 Georgia, 725
 Grain, by Water, Ft. William to Montreal, 1066
 Live Stock, I. C. C., 1263
 Louisiana Steamboat Lines, 686
 McCrea on, 731
 Mexico, Coal, 1066
 Mo. Pac., 493
 Ocean Rates, Pacific, 1550
 Prejudice Against, 513†
 Rates Too Low Before Panic, 559†
 Retail Prices and Freight Rates, 990†
 Russia, 1598
 Southeast from Ohio River, 1018, 1423†, 1455
 Southern Railroads Reply to Complaint, 826
 Southwest, 545, 1112, 1423†, 1456, 1465†, 1498
 Sugar, 87
 Texas Railroads' Reasons, 874, 970
 Transcontinental Freight Tariffs, 1603
 Westbound, Pacific Coast, 1550

Freight Rate Reduction (See also Interstate Commerce Commission Rulings):
 Arkansas, 1411, 1455
 Chicago to Southeast, 1412
 Chl. Mill. & St. P., 493
 Correcting Discriminations by, 1423†
 Grain Rates Eastbound, 1213, 1360
 Illinois Central, Milling-In-Transit, 1263
 Kansas, 1658
 Live Stock, I. C. C. Order, 1112
 Louisiana, 86
 Mississippi Cotton for Export, 1412
 Missouri, 1361, 1414, 1660
 Nebraska, 85
 Nebraska Employees Protest Against, 161†, 205
 Oklahoma, 727
 St. Louis to Gulf Ports, 1213
 Sou. Pac., Lumber, 1455
 Steamship Lines, Coastwise, 1455
 Transcontinental Freight Tariffs, 1603

Freight Traffic (See also Traffic):
 New York State, 194
 Transcontinental Lines and Oriental Business, 689

Freight Yards (See Yards and Terminals):
 Frick Co., H. C., Compressed Air Mine Locomotive, 1402*
 Friedstedt Steel Piling, 821*
 Fruit (See Refrigeration)
 Fuel (See Coal; also Oil)
 Furnace, Tilting Crucible, 738*

G

Gage of Spanish Railroads, 1306
 Gage:
 Ashton Gage Tester, 158*
 Locomotive, Ashton, 306*
 Pocket, 115*
 Galveston Terminal Railway, 995*
 Gantry (See Hoisting and Conveying)
 Gas (See also Engine):
 Fairbanks-Morse Suction Gas Producer Plant, 1221*
 Utilization of Blast Furnace Gas, 1207*
 Gasoline Car (See Motor Car)
 General Compressed Air & Vacuum Machine Co., Car Cleaning Machine, 89*, 268
 General Electric Co.:
 Arc Lamps for Yards, 157*
 Breast Drill, 270*
 Curtis Train Lighting, 305*
 Flame Arc Lamp, 113*
 Illumination of Schenectady Station, 831*
 Motor Car, 281
 Single-Phase Roads Equipped, 1404
 Tungsten Lamp, 264*
 General Foremen (See Int. Ry. Gen. Foremen's Assoc.):
 Gen. Pass. Agts. Assn.:
 Convention, 1067
 General Ry. Sig. Co.:
 N. Y. C. & H. R. Signals, Park Ave. Tunnel, 1090*
 Patent Decision, 1366
 General Ry. Supply Co.:
 Center Plates, 164†, 171*
 German Railroad Union, Prizes, 816
 Germany (See also subjects and names of railroads):
 Railroad Earnings, 1598
 Gisholt Machine Co.:
 Emery Grinder, 691*
 Lathe, Big Bore, 34*
 Gold Car Heating & Lighting Co.:
 Electric Heater Decision, 1463
 Pressure and Vapor System, 1509*
 Golden-Anderson Valve Specialty Co.:
 Controlling Altitude Valve, 1464*
 Goossens' Side Dump Car, 434*
 Gould Coupler Co.:
 Crown Type Truck Bolster, 885*
 Gov't Ownership:
 Argentina, 1524†
 France, Acquisition of Western R. R., 411†
 Italian Railroad Management, 909
 Proposed Enlargement of Canadian Govt. Railroad System, 922
 Railway Nationalization, 1488, 1532
 Relation of Railroads to the State, 955
 State Railroads in the World, 651†
 Government Regulation (See also Interstate Commerce Commission):
 Effect on Construction in Texas, 557†, 562†, 603†, 1093
 Electric Railways, 459†
 Five Years of Regulation by the States, 665
 Manufacturer and, 275†, 277
 Mechanical Standards and, 131†
 New Federalism and the Railroads, 1466†
 Protectionism and Railway Regulation, 1571†
 Railroad Securities, 461†
 Regulating Railroad Traffic, 1037
 Relation of Railroads to the State, 955
 State Control of Railroads in England, 807
 State Regulation in New York, 1408
 States as Regulators of Freight Car Service and Demurrage, 1197
 Telegraph and Telephone Companies in Canada, 542
 Theory of Rate Regulation, 1465†
 Grade Separation:
 Chicago Terminal Transfer, 1052*
 N. Y. Pub. Serv. Comm. Recommendations, 1159
 New York State, 193
 P. & R. at Philadelphia, 612*
 Road, Canal and Rail, Joint Crossing, 531*
 State Grade Crossing Laws, 1327†
 Grain (See also Freight Rate Reduction; also Interstate Commerce Commission Rulings):
 Canadian Grain to Mexico, 1658
 Corn Yields in 1908, 1363
 Elevator Allowances, Chicago, 544, 687, 1412, 1495
 Handling Export Grain at Philadelphia, 975
 Omaha Market and Rock Island-Frisco, 198, 401, 879

Grand Trunk:
 Automatic Block Signals, 1357
 Electric Operation of the St. Clair Tunnel, 1305*, 1308, 1346*
 New London-New York Steamship Line, 1411
 St. Clair Tunnel Steam Locomotive, 1350*

Grand Trunk Pacific:
 Cost, 642
 Opened for Passenger Business, 1021
 Union Station at Winnipeg, Man., 180*
 Gravity Measuring Coal Chute, 518*
 Great Britain (See British; also names of railroads)
 Great Indian Peninsula Ry.:
 Tourists' Train, 758*
 Great Northern:
 Mallet Compound, 1585*
 Valuation of Railroads in Washington, 492
 Green, Tweed & Co., Ratchet Wrench, 115*
 Green Vacuum Car Cleaner, 1318*
 Grinding (See Machine Tools)
 Groff Track Drill, 1464*
 Guard Rail (See Rail)
 Gulf, Colo. & Santa Fe:
 Galveston Trestle with Creosoted Piles, 1270*

H

Hackett High-Speed Drill, 1024*
 Hall Signal Co.:
 Patent Decision, 1366
 Hamilton Coal Storage Machine, 541*
 Harriman Lines (See also separate companies):
 Harriman Sustained in Refusal to Answer, 1581
 Meeting of Engineers, 643
 Publicity for Accidents, 1031†
 Repairs to Steel and Wooden Cars, 49†
 Reporting and Studying Rail Failures, 1233†, 1339*
 Harrison Simplex Velocipede Car, 978
 Harvard:
 Graduate School of Business Administration, 878
 Haswell Four Cylinder Engine, 773*
 Hawk Manufacturing Co.:
 Light, 1463*
 Portable Oil Burners, 207*, 1463*
 Heating:
 Combination Pressure and Vapor Car Heating System, 1509*
 Mill Heating Plant, 1369†
 Passenger Cars, 244†, 253*
 Regulating Direct Steam, 204*
 Train Pipe End Valve, 1368*
 Vapor System of Car Heating, 112*
 Hedley Anti-Telescoping Device, 1486*
 Hepburn Law (See Interstate Commerce Law)
 Hewlett Car Unloading Machine, 60
 Hicks Loco. & Car Works:
 Standard Passenger Coach, 1118*
 Highway Crossing (See also Grade Separation):
 Automatic Electric Gate, 1359
 Automatic Highway Crossing Gate, 836
 Automobiles at, 910
 Crossing Bell and Block Signal Relays, 836*
 History (See subjects and names of companies):
 Hoefer Mfg. Co.:
 Power Feed Attachment and Drill, 835*
 Hoisting and Conveying:
 Coal and Ash Handling Gantry, 833*
 Elec. Dock Hoist, 407*
 Electric Hoist, Yale & Towne, 266*
 Gantry Crane for Cinders: Wabash Terminal at Decatur, 1300*
 Grab Bucket Mono-Rail Crane, 783*
 Lifting Magnets, Cutler Hammer, 43
 Lifting Magnet, Elec. Cont. & Sup. Co., 1507*
 Spence Portable Electric Conveyor, 1172*
 Steel Troughing and Return Rolls, 835*
 Suction Conveyor, 1569*
 Wreck Crane for Bridge Construction, 837*
 Hose (See also Brake):
 Air Brake and Signal Hose Connection, 1569*
 Automatic Connectors, M. C. B. Report, 235*
 Ball Joint Unions, M. M. Assoc. Discussion, 354
 Wood's Hose Protector, 157*, 1568
 Hostility (See Public, The, Railroads' Relations with)
 Hours of Labor (See Employee)
 Hudson and Manhattan:
 Hudson River Tunnel Supports, 447
 Increased Business, 1604
 Signal Orders, 1415, 1564
 Hungarian State Railroads:
 Zone Tariff, 866

Hydrex Feit & Engineering Co.: Waterproofing in Refrigerating Work, 1613

Illinois Central: Annual Report, 1380†* Electrification, 985†, 1160, 1186, 1262 Motor Cars, 580 Oil Fuel, 1504 Shop Kinks, 766* Test of Reinforced Concrete Floor Slabs, 621*

Illinois Steel Co.: Four-Coupled Switching Locomotive, 755* Portable Coal Storage Machine, 541* Illinois Malleable Iron Co., Brakeshoe, 128 Illinois Traction System, Sleeping Cars, 791† Independent Pneumatic Tool Co.: Air Grinding Machine, 301 Thor Air Drill, 303* Thor Motorcycle, 293* Piston Air Drill, 362* Wood Boring Machines, 327*

India (See also names of roads): Freight Cars for Southern Mahratta Railway, 994*

Indiana R. R. Commission: Accident Statistics, 1601 Accidents to Trespassers, 823 Causes and Remedies for Accidents, 663 Convention on Railroad Accidents, 1467

Indiana Steel Co.: Rail Mill at Gary, 1353 Utilization of Blast Furnace Gas, 1207* Individual Car Owners' Assn., Annual Meeting, 969

Industrial Works, Wreck Crane for Bridge Construction, 837*

Ingoldsby Steel Dump Car, 263*

Injector (See Locomotive)

Injunction (See Legal Decisions)

Inland Waterways Commission, 206

Inspection Car (See Motor Car)

Interborough Rapid Transit Co.: Automatic Stops, 1377* Cooling and Ventilating the Subway, 799 Cost of Subway, 922 Hedley Anti-Telescoping Device, 1486* Side-Door Subway Cars, 586, 1564 Subway Signals, 435, 483* Track Superstructure in Tunnels, 1277, 1304*

Interchange (See Car Service)

Interlocking (See Signals, Interlocking)

International Boiler Makers' Ass'n: Annual Meeting, 11

International Creosoting & Construction Co., Galveston Trestle with Creosoted Piles, 1270*

International Railway General Foremen's Ass'n: Exhibits at Convention, 16

Interstate Commerce Commission (See also Interstate Commerce Law; also Accounting; also Freight Rates): Accident Bulletin No. 27, 570; No. 28, 1439

Annual Report, 557†, 584 Annual Reports to I. C. C., 1029†, 1040 Block Signal and Train Control Board, 395

Coal Car Distribution, 38, 193, 448, 984†, 1068, 1109

Co-operation with Amer. Ry. Assoc., 1029† Disadvantages of I. C. C. Report Forms, 1179†

Equipment Depreciation Charges, Protests to I. C. C., 1029†, 1050 Harriman Sustained in Refusal to Answer, 1581

Jurisdiction over Foreign Commerce, 1039 Opinions of Work Done by Commission, 1651 Overlapping Commission Jurisdictions, 603†

Powers Enlarged, 395 Private Car Line Demurrage, 1029†, 1090†, 1131†, 1241†, 1333†

Railway Earnings Reported; General News Section, Weekly.

Rate Making Power of I. C. C. Sustained, 1112 Rule for Commission Employees, 1546

Separate Rail and Water Rates to Orient, 193, 689, 1039, 1111, 1163, 1181†

Statistician's Report, and Valuation of Railroads, 1029†

Statistics of Railroads, Comparative, 51 Stock Yards \$2 Rate Case, 459†, 470 Transportation of Explosives, 522

Uniform Bill of Lading (See Freight)

Interstate Commerce Commission Rulings: Advantages of Location, Effect on Rates, 195

Allowance for Car-Door Boards, 494 Banana Rates, New Orleans to Kansas City, 195

Carriers Must Abide by Published Tariffs, 195 Charge for Unloading Fruit, 687

Combination Rates, 194

Interstate Commerce Com. Rulings (Continued): Competitive Rate, Not Forced to Meet, 1551

Delay in Posting Tariff Justifiable, 401

Demurrage Charges, 194

Difference in Commodities Justification for Difference in Rates, 1551

Differential Against Anthony, Kan., Unjust, 194

Elevator Allowance, Missouri River, 593

Estimated Weights, 87

Export Grain and Flour Rates, 593

Express and L. C. L. Freight, 637

Higher Rate for Shorter Distance Upheld, 195

Hotel Supplies, 1658

Hours of Telegraphers in Emergencies, 1016

Interstate Rates Within a State, 87

Limited Liability of Carriers, 87

Long and Short Haul Clause, 1456

Lumber Rates, Chicago to Pacific Coast, 194

Northwestern Lumber, 401, 508†

Lumber Rates, Memphis to New Orleans, 195

Minimum Weights, Hay Shipments, 1658

Mistake in Routing Shipments, 1456

Nashville, Tenn., No Discrimination Against, 196

New York City Demurrage Rates, 507†, 529, 545

Oranges and Vegetables from Florida, 778

Raising Locals to Make Sum Equal Through Rate, 1552

Rates on Yellow Pine, 594

Rating Upon Basis of Value, 1551

Reconsigning Charges and Demurrage, 1496

Reduced Rates with Smaller Cars, 1551

Repair of Defective Safety Appliances, 1359

Reweighing Charge Reasonable, 402

School Tickets, 1264

Shortage of Sidings Similar to Car Shortage, 401

Short-Time Excursion Fare Tariff, 1310

Special Rates to Open New Markets, 195

State Rate Considered in Determining Interstate Rate, 727

Stock-Cattle Rate, 1495

Storage Charges at Pittsburgh, 603†, 637

Storage Charges at West Fairport, Ohio, 194

Through Express Rates to Foreign Ports, 1603

Through Lake-and-Rail Rates, 43

Through Rates and Sum of Locals, 494

Ultimate Use Must Not Determine Rates, 194

Voluntary Reduction of Rate, 494

Weight of Precedent, 687

Wood Pulp Rates from Duluth, Minn., to Rhinelanders, Wis., 194

Interstate Commerce Law (See also Freight Rates): Accounting, 1543, 1598, 1629

Amended, 395

Anti-Free-Pass Section, 1409

Commodities Clause, 85, 695†, 720, 935†, 954, 973, 1263

Proposed Amendment, 1548

Shippers' Responsibility for Legal Rates, 1519†

Interurban Lines (See Electric Railway)

Iowa & Illinois, Roadbed Maintenance in the Slidell Country, 722*

Iowa Central: Mogul Engines, 1058*

Strike, 726, 1162

Iron & Steel (See also Rail; also Wheel; also Am. Iron & Steel Institute): Alloy Steel, M. M. Assoc. Discussion, 355

Jessop Tool Steel, 1670*

Loop Eyes and Upset Ends on Steel Rods, 611*, 698†

Manganese Steel for Lifting Magnets, 43

Norwegian Iron, 921

Pig Iron Production, 643, 885

Strength and Structure of Steel, 460†

Symington Iron, 104

Vanadium, 278

Watertown Arsenal Tests, 1615†

Isthmian Canal Commission (See Panama Canal)

Italian State Railroads: Army and the State Railways, 1434

Management, 359, 909

New Railroads, 924

Reinforced Concrete Ties, 1368

Reorganization, 764

J

Jack (See also Smoke Jack):

Buda Ratchet, 1370*

Duff Ball Bearing Jack, 1220*

Jessop Tool Steel, 1670*

Johns-Manville, H. W., Co.: Cylinder Packing Expander Ring, 1172*

Leak-No Metallic Compound, 1614

Phoenix Smoke Jack, 1370*

Johnson's Electric Switch and Signal Apparatus, 472*

Journal (See Bearings)

K

Kansas City Southern, Annual Report, 1522†*

Kansas City Terminal Railroad, 1180†

Kansas Railroad Commissioners, Work of, 203

Kenly, W. Switch, 1668*

Kentucky Public Commission: Constitutionality, 877

Kerlite, 1081

L

Labor (See Employee)

Lackawanna Steel Co.: Steel Piling, 832*

Lake Shore & Michigan Southern: Collision at Chesterton, 1405

Signal Contracts, 201

La Ligua-Copiapo Railroad, 1118

Lambert Holsting Engine Co.: Electric Dock Hoist, 407*

Lamp (See Lighting)

Lancashire & Yorkshire: Automatic Signal Recorder, 615

Lancaster Machine & Knife Works: Derrer Universal Shape Attachment, 834*

Lancaster Universal Breast Drill, 503*

Landis Machine Co.: Bolt Cutter; All Steel Die Head, 1271*

Latimer Switch-Point Lock, 1668*

Lea Equipment Co.: Motor Driven Cold Metal Saw, 736*

Leeds Forge Co.: Freight Cars for Southern Mahratta Railways, 994*

Hopper Cars for the Burma Railways, 1140*

Legal Decisions (See also Interstate Commerce Commission Rulings; also Legislation):

Arkansas, Baker Demurrage Law, 452

Arkansas, Full Crew Law, 85

Automobiles at Railroad Crossings, 910

Bearing Metal Patent, 91

Coal Car Distribution, 448, 984†, 1066, 1109

Colorado Railroad Commission Law, 85

Commodities Clause, I. C. C., Law, 935†, 954, 973, 1263

Controller Patent, 734

Cotton Compress and Demurrage, Texas, 1264

Damages to P. C. C. & St. L. for 1894 Strike, 1453, 1545

Harriman Sustained in Refusal to Answer, 1581

Minnesota Taxes, 1493

Mississippi Law Penalizing Removal of Suits Void, 1109

Rate Making Power of I. C. C. Sustained, 1112

Safety Appliance Law, 823

Sherman Law and Foreign Commerce, 1111

Standard Oil Decision Reversed, 594, 605†

Stock Yards \$2 Rate Case, 459†, 470

Transportation for Advertising, 542, 557†, 564

Virginia 2-Cent Fare Case, 1498

Voting, Stockholders' Rights, 1602

Waivers of Damage Rights Illegal, 1600

Wharf and Terminal Privileges at Galveston, 1411

Wisconsin Eight-Hour Law Void, 1061

Legislation (See also Gov't. Regulation; also Passenger Rate Reduction; also Freight Rates; also Freight Rate Reduction; also Employee; also Car Service)

Ash Pans on Locomotives, 129†, 395

British Patent Law, 1116

Compensation for Injuries of Employees, 824

Electric Headlights in Georgia, 685, 775

Employers' Liability Act, 38

Enforced Railroad Competition, 1054

Explosives, Transportation of, 395, 522

Federal Liability Law, 395

Five Years of Regulation by the States, 665

Full-Crew Law, Massachusetts, 1212

Kansas, Recommended, 1599

Live Stock Transportation Law (See Cattle)

Louisiana, Transferring Suits to Federal Courts, 1405

Massachusetts, 38, 39, 363†, 378

National Industrial Traffic League Recommendations, 1164

Ohio Railroad Laws, 474

Outlook for 1909, 1648

Sherman Law, Secy. Strauss on, 1545

State Grade Crossing Laws, 1327†

Texas Full-Crew Law Nullified, 1600

Wisconsin Ry. Comm. Recommendations, 1550

Wisconsin Telephone Law, 1311

Lehigh Coal & Nav. Co.: Canal, 870*

Lehigh Valley: Annual Report, 1034†*, 1077

Lehigh Valley Coal Co.: Oil Burning Locomotive, 834

GENERAL INDEX—Continued.

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Lighting:
 Arc Lamps for Yards, 157*
 Canadian Car Lighting Rules, 1666
 Car Lighting Engineers' Assoc. Reports, 1442
 Curtis Train Lighting, 305*
 Electric Headlights in Georgia, 685, 775
 Flame Arc Lamp, 113*
 Hawk Light, 1463*
 Plintsch Light Statistics, 1269
 Rosenberg Generator Train Lighting, 89, 247
 Station at Schenectady, 831*
 Tungsten Lamp, 264*

Lincoln Variable Speed Motor, 128*, 270*, 306*

Link-Belt Co.:
 Flint Rim Sprocket Wheel, 885*
 Reinforced Concrete Coal and Cinder Station, 719*

Steel Troughing and Return Rolls, 835*

Livestock (See Cattle)

Livingston Four Cylinder Engine, 772*

Loading (See Car Service)

Local Freight Agents' Associations. (See Am. Assoc. of Loc. Frt. Agts.' Assoc's.)

Locomotives:
 American (See Locomotive, Eight-Wheel)
 Ash Pans, Federal Law, 129†, 395
 Atlantic, Use of, 1908
 Bearings (See Bearings)
 British Practice, 526
 Built in 1908, 1616†
 Compensated, 708*, 768*, 815*, 1383†*
 Compound Balanced, Economy of, 411†
 Compound, De Glehn, Paris-Orleans, 897*
 Compound, 4-Cyl., Consolidation, Eastern of France, 392*
 Comp., Four-Cyl., M. M. Assoc. Report, 344, 349*
 Compound Mogul, Eastern of France, 393*
 Compounds, Vauclain, C. M. & St. P., 1278†, 1574*
 Compressed Air, 1402*
 Consolidation, Chesapeake & Ohio, 627*
 Consolidation, Four-Cylinder Compound, Eastern of France, 392*
 Consolidation, White Pass & Yukon, 756*
 Crane (See Hoisting and Conveying)
 Double Piston, Ritchie, 815*, 1383†*
 Early Locomotive Works, 914
 Eight-Wheel, Eastern of France, 187*
 Express Locomotives, Recent Types, 1098
 Fire Fighting, at Pittsburgh, 776
 Fireless, 468*
 Four-Cyl. Compounds, Eastern of France, 187*
 Four-Cylinder, Haswell, 773*
 Four-Cylinder, Livingston, 772*
 Four-Cyl., L. & S. W., 279*
 Four-Cylinder Tank, Eastern of France, 392*
 Frame (See Locomotive Frame)
 Front Ends, Self-Cleaning, 162†, 177
 Headlights (See Lighting)
 Injector, Sellers, 1258*
 Intermediate Crank Shaft Engine, 769*
 Mallet Compounds, 1517†, 1529*, 1583*
 Mallet, Am. Loco. Co. Study, 1586*
 Mallet, A. T. & S. F., 1586*
 Mallet, B. & O., 1587*
 Mallet, Cent. of Brazil, 1589*
 Mallet, Erie, 1583*
 Mallet, Gt. Nor., 1585*
 Mallet, M. M. Assoc. Report, 316, 324
 Mallet, Peking-Kalgan, 1250*
 Mallet, Santo Domingo, 1444*
 Mikado, Virginian Railway, 420*
 Mine, Compressed Air, 1402*
 Mine, Oil Burning, 834
 Mogul Compound, Eastern of France, 393*
 Mogul, Iowa Central, 1058*
 Narrow Gage, 755*
 Norris, 574*
 Oil Burning Mine, 834
 Ordered in 1908, 1617†, 1631
 Pacific, Chicago & Alton, 1041*, 1244
 Pacific De Glehn 4-Cylinder Compound, Paris Orleans, 897*
 Pacific, Norfolk & Western, 170*
 Pacific, Use of, 1098
 Prairie, East Broad Top, 755*
 Prairie, Use of, 1098
 Prairie, Wabash, 536*
 Preventable Wastes and Losses, 12*
 Rack, Transandine Railroad, 480*
 Ratios, 163†
 Repairs, 32
 Repairs, A. T. & S. F., 182*
 Repairs, Blanks for Reporting, 290, 297*
 Rocket, 860*
 Santa Fe Type; A. T. & S. F., 576*
 Side Lever Engines, 709*, 768*, 815*, 1383†*
 Single Driver, London, Brighton & So. Coast, 384*
 Six-Wheel, London & North-Western, 386*
 Six-Wheel, Midland Ry., 386*

Locomotives (Continued):
 Six-Wheel, North-Eastern Ry., 388*
 Standards, 460†
 Superheater (See Superheater)
 Switching, Ill. Steel Co., 755*
 Switzerland, Building in, 29
 Tank, Eastern of France, 391*
 Tank, London, Brighton & South Coast, 814*
 Tank, Sierra Leone Gov't. Ry., 1009*
 Ten-Coupled, St. Clair Tunnel, 1350*
 Tender (See Locomotive Tender)
 Ten-Wheel Denmead, 176*
 Ten-Wheel, Eastern of France, 187*
 Ten-Wheel, L. & S. W., 279*
 Ten-Wheel, Southern Pacific, 944*
 Ten-Wheel, Use of, 1098
 Trevitick's, 1297*, 1574*
 Twelve Wheel, Nor. & West., 170*
 Valve (See Valve)
 Weight Increased, 1137†, 1242‡
 Winans' Engines and Boilers, 861*
 Locomotive, Electric:
 Maintenance, 886
 Pony Wheels, New Haven Electric Locomotives, 1472*
 St. Clair Tunnel, 1305*, 1308, 1346*

Locomotive, Freight:
 A. T. & S. F., Mallet, 1586*
 A. T. & S. F.: Santa Fe Type, 576*
 B. & O., Denmead Ten-Wheel, 176*
 B. & O., Mallet, 1587*
 Cent. of Brazil, Mallet, 1589*
 Chesapeake & Ohio, Consolidation, 627*
 Eastern Railway of France, 185*, 390*
 Erie, Mallet, 1588*
 Gt. Nor., Mallet, 1585*
 Ill. Steel Co., Switching, 755*
 Iowa Central, Mogul, 1058*
 London & North-Western, Six-Wheel, 386*
 London, Brighton & South Coast, 384*
 Midland Ry., Six-Wheel, 386*
 N. & W., Twelve Wheel, 170*
 North-Eastern Ry., Six-Wheel, 388*
 Peking-Kalgan, Mallet, 1250*
 St. Clair Tunnel, Ten-Coupled, 1350*
 Santo Domingo, Mallet Compound, 1444*
 Virginian Railway, Mikado, 420*
 White Pass & Yukon, Consolidation, 756*

Locomotive, Passenger:
 A. T. & S. F., Mallet, 1586*
 Chicago & Alton, Pacific, 1041*, 1244
 C. M. & St. P., Vauclain Compound, 1278†, 1574*
 East Broad Top, Prairie, 755*
 Eastern Railway of France, 185*, 390*
 Express Locomotives, Recent Types, 1098
 L. & S. W., Ten-Wheel, 279*
 London, Brighton & South Coast, Tank, 814*
 N. & W., Pacific, 170*
 Paris-Orleans, 4-Cylinder Compound, Pacific, 897*
 St. Clair Tunnel, Ten-Coupled, 1350*
 Sierra Leone Gov't. Ry., Tank, 1009*
 Southern Pacific, Ten-Wheel, 944*
 Wabash, Prairie, 536*

Locomotive Boiler (See also Water Purifying):
 Brown Feed Water Heater, 1655*
 Explosions, from 1879 to 1907, 11
 Flue Cleaner, Clark, 156, 551*
 Flue Cleaner, Ryerson, 273*
 Pacific Locomotive, Paris Orleans, 300*
 Washing and Filling, M. M. Assoc. Report, 275†, 290, 296
 Washing and Filling with Hot Water, 1133†
 Washing and Filling, Wabash Terminal at Decatur, 1301*
 Wood's Flexible Tube Plates, 1204*

Locomotive Firebox:
 Ash-pan Law, 129†, 395
 Combustion Processes in English, 173
 Flexible Staybolts, 273
 Flexible Staybolts, Applying, 169*
 Grate Area, 936†, 1384†
 Mechanical Stokers, 276†, 287, 297
 Sloping, 860*
 Staybolt Tests, 503
 Wood's Corrugated Firebox, 1204*

Locomotive Frame:
 Failures, 1491, 1524†
 Locomotive Performance (See also Fast Trains and Runs):
 Economics of Grade Revision, 749†, 1525†
 Firing, Penna. Railroad, 193
 Locomotive Tender Derailments, 1379†
 Lodge & Shipley Machine Tool Co., Derrer Universal Shape Attachment, 834*
 London & North Western:
 Royal Train, 1542*
 Shrewsbury Derailment, 416†
 Six-Wheel Locomotive, 386*
 Traffic Agreement with Midland, 826
 London & South Western:
 Electric Switch and Signal Apparatus, 472*
 Ten-Wheel Locomotive, 279*

**London, Brighton & South Coast, Locomotive, 384*, 814*
 Long Island R. R.:**
 Automatic Block Signals, 534*
 Interlocking, Bushwick Junction, 1254*
 Dutch Kills Interlocking, 8*
Louisiana Ry. & Nav. Co.:
 Fired for Collision, 1406
Louisville & Nashville:
 Annual Report, 1470†*
 Coal Chutes, 849*
Love Brakeshoe Co., Armbrust Shoe, 120
Lubrication (See also Lubrication):
 Detroit Sight Feed Air Cylinder Lubricator, 1220*
 Driving Wheel Flanges, 396*, 608†*
 Loose Pulley Oil Cup, 1023
 Michigan Lubricators, 306
 Otley Products, 116
Lumber (See also Ties and Timber):
 Production in 1907, 1017, 1494

M

McConway & Torley, Janney Coupler, 264
McKeen Motor Car Company, 551
McKenna, R. F., 246*
McMyler Manufacturing Co., Coal Handling Plant, 1023

Machine Tools:
 Air Grinding Machine, 301
 All-Steel Die Head, 1271*
 Band Saw, Straining Device, 242*
 Boring and Turning Mill, 84*
 Breast Drill, Electric, 270*
 Bulldozer, 1507*
 Car Mortiser, 89*, 259*
 Circular Saw, Double, 205*
 Combined Rip and Resaw, 736*
 Crank Pin Truing Machine, 41*, 105*
 Crank Pin Turner, 269*
 Cylinder and Valve Chamber Boring Machine, 736*
 Derrer Universal Shape Attachment, 834*
 Double Spindle Drill, 1072*
 Double Swivel Vise, 645*
 Drill, American High Speed Radial, 1319*
 Drill Grinding Machine, 929*
 Drill Socket, Use-Em-Up, 978*
 Driving Wheel Lathe, 17*, 743*
 Driving Wheel Lathe, Niles, 502*
 Emery Grinder, 691*
 Exhibits at M. C. B. and M. M. Conventions, 341
 Flue Welding Machine, 502*
 Grinding Machine, Emmert, 1117*
 Groove Track Drill, 1464*
 High-Speed Drill, 1024*
 High-Speed Tools, 743†
 Horizontal Drilling and Boring Machine, 1072†
 Hot Pressed Nut Machine, 1272*
 Key-Seating Machine, 264*
 Lathe, Big Bore, 34*
 Milling Machine, Brown & Sharpe, 112
 Milling Machine, Independent Feed, 305*
 Milling Machines, Power in Driving, 240*
 Molder, Four-Side, 304*
 Motor Driven Cold Metal Saw, 736*
 National Machine Recorder, 1071*
 Oxy-Acetylene Welding and Cutting Tool, 967*
 Pipe Cutter, 1670*
 Piston Air Drill, 362*
 Planer, Cabinet Smoothing, 159*
 Planer, Heavy Forge, 64*
 Pneumatic Tools, Los Angeles Shops, Sou. Pac., 1388*
 Power Feed Attachment and Drill, 835*
 Power Requirements of Railroad Shop Tools, 760*
 Ratchet Wrench, 115*
 Reamer, Bell Yoke, 766*
 Rotary Planing and Sawing Machine, 1422*
 Saw, Portable Contractors', 886*
 Shear, Rotary Bevel, 304
 Shop Notes, Wabash, 1256
 Single Head Bolt Cutter, 1271*
 Speed Counter, 929*
 Spline Milling Machine, 644*
 Sprocket Wheel Rim, 885*
 Steel-Tired Car Wheel Lathe, 428*
 Stoever Pipe Machine, 158*, 242*, 268*, 305*
 Thor Air Drill, 303*
 Tie Mill, 645*
 Tool Grinder, Electrically Driven, 1570*
 Truck Side Frame Facing Machine, 1506*
 Truing Devices, 1568*
 Universal Breast Drill, 503*
 Wood Boring Machines, 327*
Madeira & Mamore Railroad, 1051
Madison-Kipp Oil Pump, 88*, 272
Magnets, Lifting:
 Cutler-Hammer Clutch Co., 43
 Elec. Con. & Mfg. Co., 1507*
Mail:
 Can. Pac. Subsidiy, 398

Mail (*Continued*):
 Compensation of Railroads for Hauling, 1137
 Computation of Average Weight, 39
 Monthly Payments, 1495, 1551
 Payment on Short Line Basis, 1261
 Stamps Perforated with Companies' Initials, 429*
 Weigh the Mails Annually, 1573†
 Maine Central, Signal Installations, 1169
 Maintenance of Way (See also Rail; also Ties and Timber):
 Angle Bar (See Rail)
 Ashes on Embankments, 590
 Behavior of Rails Under an Engine, 1383†
 Economics of Grade Revision, 749‡, 1525‡
 Elastic Insertion-Plates, 374
 Grooved Track Drill, 1464*
 Melting Snow Around Switches, 918, 943
 Organization of Department, 1576
 Pennsylvania Track Prizes, 1065
 Relaying Rails, C. B. & Q., Costs, 1387
 Roadbed Maintenance in the Slave Country, 722*
 Screw Spike, Pittsburgh, 1614*
 Spike and Tie Plate Corrosion, 24*
 Tools, Care of, 1577
 Track Inspector, Ellis Automatic, 501
 Track Superstructure in Tunnels, 720*, 1277†, 1304*, 1384*, 1430*
 Track-Testing Machines, 1426†
 Weed Killing System, 1570*
 Maintenance of Way Association (See Am. Ry. Engineering and Maint. of Way Assoc.)
 Mallory Line, Steamship Brazos, 1111*
 Manganese Steel, Wharton Manganese Steel Crossing, 1223*
 Manganese Steel Rail, 1536*
 Manila Railway, 762*
 Martin Flange Lubricator, 608†*
 Mason Steam Fan Regulator, 1507*
 Masonry (See Bridge; also Concrete, Reinforced)
 Master Car Builders' Assoc.:
 Abuse of Repair Card, 1582
 Air Brake Hose, 236
 Apprentice Committee Exhibit, 131
 Automatic Connectors, 235*
 Bequests to, 1061
 Box Car Doors, 257*
 Brakeshoe Tests, 139, 142*, 376
 Cast Iron Wheels, 211†, 221*, 243†
 Committees, 737, 841†
 Convention, 412†
 Convention Exhibits, 121, 140, 331
 Convention Souvenirs Abolished, 1423†
 Coupler Knuckles, Replacing Broken, 49†
 Coupler Tests, 143*, 216
 History, 97†
 Interchange Rules, 225, 243†
 Journal Boxes for Passenger Cars, 223
 Journals on Standard Axles, 292
 Lateral Bracing of Steel Freight Cars, 219
 Loading Long Material, 220
 Marking Freight Cars, 223*
 1909 Conventions, 1369, 1453
 Paint for Steel Cars, 243†, 258
 President's Address, 135
 Protection of Trainmen, 258
 Secy. Moseley's Address, 136
 Side Bearings and Center Plates, 228, 244†
 Standards and Recommended Practice, 138, 141
 Standards, Work on, 129†
 Steel Passenger Cars, 229*
 Subjects for 1909, 255
 Tank Cars, 255
 Track Exhibit, 308
 Ventilating and Heating Passenger Cars, 244†, 253*
 Merchants' Despatch Transportation Co., Underframe for Refrigerator Cars, 203*
 Metropolitan Amalgamated Carriage & Wheel Co., Shanghai-Nankin Cars, 522*
 Mex. Cent., Tie Creosoting, 930
 Mex. Ry., Steel Tie, 699*, 940†, 1397
 Mich. Cent.:
 Detroit River Tunnel, 58
 Detroit Tunnel Track Superstructure, 1384*
 Michigan Lubricators, 306
 Midland Ry.:
 Electrification, 1001*
 Six-Wheel Locomotive, 386*
 Traffic Agreement with London & North-Western, 826
 Milwaukee Car Mfg. Co., Plant, 174*
 Minn. & St. Louis, Producer Gas Power Plant, 935†, 948*, 1037†
 Minneapolis Steel & Machinery Co., Producer Gas Power Plant, 935†, 948*, 1037†
 Missouri, Kansas & Texas:
 Annual Report, 1521†*
 Missouri Pacific:
 Annual Report, 1520*
 Collision at Knobnoster, Mo., 491
 Monorailway in New York, 1407
 Motor (See also Locomotive, Electric):
 Friction Brake, 1422*
 Lincoln Variable Speed, 128*, 270*, 306*

Motor Car (See also Automobile):
 Buda Motor Velocipede and Section Car, 1369*
 C. R. I. & P. Steam, 238*, 961*, 1405
 McKeen Company, 531
 General Electric, 281
 Motor Trains on the Taff Vale, 1452*
 Tabor & Northern, 1116
 Union Pacific No. 14, on Illinois Central, 580
 Velocipede Car, Simplex, 978
 Wisconsin, 580
 Motorcycle, Thor, 293*
 Municipal ownership (See Government Ownership)
 Municipal Traction Co.:
 Default in Rental, 1109
 Plan of Trusteeship, 1160
 Three-Cent Fare Results, 445, 635
 Mutual Transit Co., New Lake Steamers, 1606

N

Nashville, Chat. & St. Louis, Signal Installations, 1415
 National Assn. of Ry. Commissioners, Annual Meeting, 1193
 National Industrial Traffic League, Annual Meeting, 1164
 National Machine Recorder, 1071*
 National Railways of Mexico, 957
 National Transcontinental (See Grand Trunk Pacific)
 National Tube Co., Kewanee Union, 239*
 National Vacuum Cleaning Co., Electrically-Driven Vacuum Car Cleaner, 1318*
 Nebraska, Employees' Protective Assn., 698†*, 942†, 969
 New England Navigation Co., Steamship Commonwealth, 447
 Newhall Eng. Co., George M., Air Brake and Signal Hose Connection, 1569*
 New Orleans & North Eastern, Collision at Little Woods, 1406
 New Orleans Terminal Co., Union Station, 427*
 New So. Wales Gov't Roads, Rates and Results of Operation, 1378†
 Newton Machine Tool Works:
 Boring Machine, 736*
 Double Spindle Drill, 1072*
 Rotary Planing and Sawing Machine, 1422*
 N. Y. Air Brake Co., Sou. Pac. Air Brake Tests, 1466†, 1477*, 1538*, 1590*
 New York Central & Hudson River:
 Derailment at Williamsbridge, 878, 1453
 High Tension Transmission Wires, 878
 Multiple Unit Train Service, 77
 Operating Organization, 486*
 Rails, 446
 Removing Grand Central Train Shed, 632*
 Signals in Park Avenue Tunnel, 1090*
 New York, Chicago & St. Louis:
 Scherzer Bascule Span at Cleveland, 36*
 New York City (See also New York Public Service Commission):
 Freight Problem on Manhattan Island, 1257
 Transportation on Five Levels, 399*
 New York, New Haven & Hartford:
 All-Electric Interlocking at New Haven, 1102*
 Annual Report, 1084†, 1123
 Boston & Maine Earnings, 841†
 B. & M. Stock, 39, 363†, 378, 1545
 Demurrage Reduction, 1233†
 Elec. Service, Complete in New York, 445
 Football Traffic, 1571†, 1577
 Freight Arrangements with New York Connections, 879, 1111
 New England Railroad Situation, 513
 Overhead Construction, 1179†
 Pony Wheels on Electric Locomotives, 1472*
 Revaluation, 1081†
 New York, Philadelphia & Norfolk, 681*, 750†
 New York Public Service Commission:
 Appropriation for Expenses, 1545
 • Directory of Corporations, 1599
 Fenders, Tests of, 491
 Marking L. C. L. Freight, 557†, 593
 Street Car Operation Recommendations, 1162
 Train Delays, 1016, 1261, 1493
 Shunts on, 1387
 New York Subway (See Interborough Rapid Transit)
 Niagara Device Co., Sand Blast and Paint Spray, 1117*
 Niles-Bement-Pond Co.:
 Driving Wheel Lathe, 502*
 Steel-Tired Car Wheel Lathe, 428*
 Nitro-Glycerine (See Explosives)
 Norfolk & Western:
 Annual Report, 987†*
 Coal and Coke Cars, 51†, 52*
 Pacific Locomotive, 170*
 Twelve-Wheel Freight Locomotive, 170*
 North Borneo Railroad, 202
 North British Loco. Co., Mallet Compound Locomotive for North China, 1250*
 North Central Association of Railway Commissioners, 1553
 North Eastern Ry., Six-Wheel Locomotive, 388*

Northern Pacific:
 A. B. C. Train Rules, 1109, 1286
 Annual Report, 1468†*, 1511
 Collision near Young's Point, Mont., 1061
 Double Track Between Seattle and Tacoma, 1244
 Land & Improvement Co., 1405
 Pre-Cooled Fruit Shipping, 1243
 Signal Orders, 1069
 Signal Plans, 1459
 Tie Treating Plant, 32
 Valuation of Railroads in Washington, 492
 Northern R. R. of France, Universal Auto-Combiner Interlocking, 1199*
 Northwestern Elevated, Signal Orders, 1267
 Norway, Bergen Railway, 967
 Nuts, Castle, M. M. Assoc. Report, 312, 319*

O

Officer (See also Organization; also Public, The Railroads' Relations with; also Employee, Wage Increases):
 Accounting Officers and Their Superiors, 990†
 Freight Agent, Ideal, 547
 Master Mechanics and Master Car Builders' Duties, 97†
 Road Foreman of Engines, Duties, 850
 Traveling Engineer, 847
 Ohio Elec. Ry., Maumee River Bridge, 1255*
 Oil (See also Lubrication):
 Austrian Petroleum Traffic, 1106
 Handling Oils on the Santa Fe, 1443*
 Ill. Cent. Oil Fuel, 1504
 Refined Pipe Line, Sou. Pac., 970
 Use of Fuel Oil by Railways, 1564
 Wyanacme Product, 1666
 Okla. Corporation Comm., Information Ordered, 1061
 Oliver Mfg. Co., Wm. J., Air Dump Car, 873*
 Operating Expenses (See also Annual Reports; also Accounting):
 Increase Since 1901, 5†, 415†
 Oregon Railroad & Navigation:
 Valuation of Railroads in Washington, 492, 1357
 Oregon R. R. Comm., Constitutionality, Suit, 877
 Oregon Short Line (See also Harriman Lines):
 Signal Orders, 1612
 Organization:
 Need of Co-operation Among Railroads, 748†, 990†
 N. Y. C. & H. R., 486*
 Otley Manufacturing Co., 116
 Ownership (See Finance; also Government Ownership of Railroads)

P

Packing:
 Cylinder Packing Expander Ring, 1172*
 Metallic, Molding Machine, 766*
 Steam Joint Cement, 1370

Paint:
 Elastica, 1370
 Experiments with Paint for Iron and Steel, 935†
 Paint Spray, Niagara, 1117*
 Sand Blast, Niagara, 1117*
 Sherardizing Process, 272*
 Steel Freight Cars, M. C. B. Assoc. Report, 243†, 258

Panama Canal:
 Annual Report of Commission, 1545
 Cost to Date, 777
 Dirt Cars, 407
 Dredging Equipment, 803
 Improvements on Flat Cars, 1023
 Progress, 592

Paris-Orleans:
 De Glehn Compound Locomotives, 897*
 Pacific Locomotive Boiler, 300*
 Parker Double Swivel Vise, 645*
 Parkersburg Iron Co., 160*

Pass:
 A. T. & S. F., Biblical Injunctions, 1571†*
 Exceptions in I. C. Law, 445
 Indictments for Misuse, C. R. I. & P., and Ill. Cent., 637, 649†
 Louisville & Nashville Test Suit, 1409
 Nebraska, Advertising, 1455
 Surgeon, Union Pacific, 1015
 Texas Statistics, 727, 1066, 1262
 Transportation for Advertising, 542, 557†, 564

Passenger Rates (See also Interstate Commerce Commission Rulings; also Pass; also Passenger Rate Reduction):
 Association Ticket Paper, 1606
 Baggage Rates, Excess, Based on Mileage, 1552
 Baggage Rules in Texas, 1264
 Commutation Rates, Erie, 1546
 Fares and Wages in England, 1261
 Five Years Regulation by the States, 665
 Lawyer's View of Rate Litigation, 1306
 Lending a Commutation Ticket, 446
 Principles Involved in Judicial Determination of, 1106, 1143, 1205, 1252
 Railway Ticket Protective Bureau, 1546

GENERAL INDEX—Continued.

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Passenger Rates (*Continued*):
Reasonable Rates, 649†, 653‡, 750†
Second Class, Missouri River to Pacific, 825
Theory of Railroad Rates, 817*, 857, 911*, 951*, 1137†, 1242†
Three Cent Fares in Cleveland, 445, 635
Ticket, Norwich & Worcester, 547*
Tickets, C. B. & Q. Rule, 823
Ticket Scalpers, San Antonio, Tex., 1603
Zone Tariff, Hungarian State Railroads, 866

Passenger Rate Increases:
Arkansas, 1163, 1214, 1263
Georgia Railroad, 825
Minneapolis, Red Lake & Northern, 636
Mo. Pac., 493
Russia, 1476
Wisconsin, Cash Fares, 1599

Passenger Rate Reduction (See also Interstate Commerce Commission Rulings):
Arkansas, 926, 973, 1163, 1213, 1214, 1264, 1309, 1361
Illinois: Chicago & Alton Results, 824
Merchants' Rates to New York, 1495
Missouri, 1361, 1414, 1660
Nebraska, 85
New York-Chicago, 87
Penn. 2-Cent Fare Law, 1545
Pennsylvania 2-Cent Fare Law and B. R. & P., 1018
Pullman Co., 193, 1661
South Dakota, 1606
Texas, Parlor and Sleeping Car, 1411
Texas, 3 to 2½ Cents, 1111
Two-Cent Fare Throughout Country, 1360
Virginia, 1498
Wheeling & Lake Erie, 1658

Passenger Traffic (See also Traffic):
Automobile in Railroad Rivalry, 1465†
Football, N. Y. N. H. & H., 1571†, 1577
San Francisco Holiday Traffic, 450
Train Mileage and Passenger Revenues, 1328†*
Transatlantic, 1311

Pawling & Harnischfeger:
Horizontal Drilling and Boring Machine, 1072*

Pay (See Employee)
Peking-Kalgan:
Mallet Compound Locomotives, 1250*
Penn. Coal & Coke Ry.:
Receivership, 776

Pennsylvania Company:
Annual Report, 366†

Pennsylvania Railroad:
Altoona Railroad Club, 93
Car Unloaders, 802
Creosoted Ties, 1504
Discipline, 685
Electrification Contract, 1320
Electrification, Direct Current, 1564
Fire Fighting Equipment for Tugboats, 585*

Fire Fighting Locomotives, 776
Handling Export Grain at Philadelphia, 975
Hudson River Tunnel Supports, 447
Interlocking, First in America, 992*
Prizes for Maintaining Track, 1065
Rail Sections, 5†
Sayre Band and Ball Nine, 643
Steel Coach, 251*
Strike Averted, 1547
Surprise Tests, 1210
Switching Speed, 130†, 557†
Timber Nursery, 1546
Timber Superstructure in Tunnels, 1277†, 1304*
Track-Testing Machines, 1426†
Truck, Automobile Baggage, 446*
Wilmington Passenger Station, 589*
Y. M. C. A., 542

Pennsylvania Steel Co.:
Track-Testing Machines, 1426†
Pension (See Employee):
Per Diem (See Car Service)
Permanent Way (See Maintenance of Way)
Philadelphia & Reading:
Commodities Clause, 695†, 720
Philadelphia Track Elevation, 612*
Philadelphia, Baltimore & Washington:
Washington Terminal, 1192
Water Service Plant, 582*

Philadelphia Rapid Transit Subway, 720*
Picked Up on the Road: 33, 474, 490, 700, 752, 755, 856, 901

Piece Work (See Employee)
Piling:
Atlantic City Boardwalk, 99*
Lackawanna Steel Sheet Piling, 832*
Steel, 821*
Steel Sheet for Pipe Line Trench, 430*

Pipe (See also Machine Tools):
Kewanee Flange Union, 239*
Locomotive Front End, 271*
Stoever Pipe Machine, 158*, 268*, 305*

Pittsburgh & Lake Erie:
Pollock Coalage Station, 719*

Pittsburgh Forge & Iron Co.:
Screw Spike, 1614*

Planer (See Machine Tools)

Pneumatic Tools (See Machine Tools)

Pole:
Steel Pole for Line Construction, 1422

Politics, Railroads In, 695†

Poor's Manual for 1908, 375

Pratt & Whitney Co.:
Spline Milling Machine, 644*

Pressed Steel Car Company:
Penn. R. R. Steel Coach, 251*

Price (See Business Situation)

Proctor Tunneling Machine, 929*

Prosperity (See Business Situation)

Prussian State Railroads:
Electrification, 407

Goossens' Dump Car, 434*

Public, The, Railroads, Relations With:
American Railroad Employees' and Investors' Association, 971, 986†
Employees and the Public, 276†
Master Mechanics and Master Car Builders, 97†

Oklahoma, 1405
Popular Feeling at End of 1908, 1649
Small Shipper and the Railroad, 1136‡
Southern Commercial Congress Resolution, 1548
Station Agent and the Public, 923
Ticket Agent, 842†, 845†, 896†
Unpopularity and the Cure for It, 796‡, 1136‡

Yoakum, B. F., Work of, 1517†

Pullman Co.:
Annual Report, 1408
Investigation of, 1602
Steel Mail and Baggage Cars, St. L. & S. F., 133*
Steel Passenger Car, 229*

Pump:
Electricity at Moberly Shops, Wabash, 1403
Emerson Vacuum, 1012*
Oil, for Steam Hammers, 88*
Oil Pump for Steam Hammers, 272

Pyramid, Detroit, 777

Quebec & Lake St. John, 203

Rail (See also Maintenance of Way)
Am. Ry. Assn. Specifications, 443
Angle Bar, History of, 1284*
Corrosion by Brine, 24*
Examination of 100-lb. Rails, 478*
Features of the Present Situation, 438
Gary Mill, Indiana Steel Co., 1353
Guard Rail Clamp, 1171*
Hardness and Wear of, 1424†
Maint. of Way Assn. Committee Work, 175
Manganese Steel, Rolled, 1536*
Mashed and Split Heads, 867*
Mechanical Defects, 919
New York Central, 446
Pennsylvania Sections, 5†
Physical Qualities and Mechanical Treatment, 475*
Production in 1907, 978
Record Blanks, M. of W. Assn. and Harriman Lines, 1233†, 1339*
Track-Testing Machines, 1426†
Watertown Arsenal Tests, 1615†
Wharton Manganese Steel Crossing, 1223*
York Cross Rolling, 475*

Railroads (See also Public, The R. R.'s Relations with):
Mileage Built in 1908, 1616†, 1624
Mileage in World, 1†

Railroad Age Gazette, Duty of, 2†

Railroad Commissions (See names)

Railroad Supply Co.:
Crossing Bell and Block Signal Relays, 836*

Railway Business Association, 1062, 1110, 1132†, 1161, 1212, 1278†, 1307

Ry. Chemical Sprayer Co.:
Weed Killing System, 1570*

Railway Financial Officers, Annual Meeting, 1211

Railway Materials Co., Journal Box, 114*

Railway Signal Association:
Annual Meeting, 1179†, 1188*
Automatic Stops and Cab Signals, 1082†, 1202

Convention Exhibits, 1192
History of the Storage Battery, 1198
Proposed Supply Exhibit at Chicago, 986†
Report on Rubber Covered Wire, 1081†, 1190
Report on Signaling Practice, 1196*
September Meeting, 943

Railway Supply Manufacturers' Assoc. (See also M. C. B. and M. M. Assoc's):
Officers, 106*, 284

Ralston Steel Car Co.:
Caboone Car Underframe, C. M. & St. P., 1142*
General Service Car, 302, 811*

Gondola, 302
Underframe for Refrigerator Cars, 203*

Ramapo Iron Works:
Rolled Manganese Steel Rail, 1536*

Rate Law (See Interstate Commerce Law)

Raymond Concrete Piles for Atlantic City Boardwalk, 99*

Reading Company (See Philadelphia & Reading)

Rebates (See Freight Rates)

Receiverships:
In 1908, 1618†
Pennsylvania Coal & Coke, 776

Reclamation Chic., R. I. & Pac., 447

Reduction of Time or Forces (See Employee)

Refrigeration (See also Ventilation):
Absorption Machine, 625
Pre-Cooled Fruit Shipping, Northern Pacific, 1243
Pre-Cooling Plants in the South, 865
Waterproofing in Refrigerating Work, 1613

Regulator, Mason Steam Fan, 1507*

Reid, Sir Robert G., 379*

Reinforced Concrete (See Concrete, Reinforced)

Reports, Annual (See Annual Reports; also names of companies)

Retrenchment (See Employee, Reduction of Time and Forces; also Business Situation)

Review of 1908, 1621†

Rhodesian Railways, 1015

Ridgway Dynamo & Engine Co.:
Side Crank Engine, 1505*

Ritchie Double Piston Engine, 815*, 1383‡*

Ritchie's Safety-Valve, 1383‡*

Ritter Folding Door, 303*

River (See Waterways)

Riveter (See Machine Tools)

Roadbed (See Maintenance of Way)

Roadmasters' and M. of W. Assn.:
Convention, 1395, 1576
Convention Exhibits, 1416

Rochester, Syracuse & Eastern, Signal Contract, 597

Rockwell Furnace Co.:
Tilting Crucible Furnace, 738*

Rolling Mill (See Rail)

Roof:
Robertson Box Car, 330*
Carey Compound, 113
Cloth for Car Roofing, 1462

Rosenberg Generator Train Lighting System, 89, 247

Roundhouse (See Yards and Terminals)

Rules (See Employee; also Train Rules)

Rushton Trailer Truck, 576*

Russia:
Railroad Earnings, 1409

Rust Prevention (See Paint)

Ryerson, Joseph T. & Son:
Crank-Pin Truing Machine, 41*, 105*
Flue Cleaning Machine, 273*
Flue Welder, 158*, 502*
Key-Seating Machine, 264*

Lennox Rotary Bevel Shear, 304*

S

St. Louis & San Francisco:
Annual Report, 1282†*, 1325
Industrial Plants, 1307
Oklahoma License Revoked, 877
Signal Orders, 977, 1366, 1503
Steel Mail and Baggage Cars, 133*

St. Louis, Southwestern, Annual Report, 1237†*

Safety Appliance (See also Brake):
Ashpan Law, 129†
Automatic Stops and Cab Signals, 1082†
Automatic Stops and Cab Signals, Ry. Sig. Assn. Report, 1202
Automatic Stops in the New York Subway, 1377†
Fender Tests, 491
I. C. C. Block Signal and Train Control Board, 395
Protection of Trainmen, M. C. B. Assoc. Report, 258
Safety Stop Device on the Burlington, 572
Taking Chances, 370†
Washington, Recommended in, 1612

Safety Appliance Law:
Car Repairs Under, 1359
Fines for Violations, 1405
Reasonable Care Clause, 823
Suits for Violation, 85, 542, 1307

Safety Car Heat. & Light. Co.:
Pintch Light Statistics, 1269
Regulating Direct Steam Heating System, 204*

Safety Emery Wheel Co., Tool Grinder, Electrically Driven, 1570*

Salary (See Officer; also Employee, Wage Reductions)
 Sand Blast, Niagara, 1117*
 Santo Domingo, Mallet Compound for Plantation Railroad, 1444*
 Saw (See Machine Tools)
 Saxby & Farmer Interlocking Machine, 992*
 Scherzer Lifting Lift Bridge Co., Cleveland Bridge, 36*
 Schoen Steel Wheel Co., Sale, 500, 550
 Schroyer Uncoupling Device, 88*
 Schools (See names)
 Scullin-Gallagher, Excel Coupler, 219
 Seaboard Air Line:
 Improvements at Tampa, 845
 Sellers, Wm., & Co.:
 Boring and Turning Mill, 84*
 Drill Grinding Machine, 929*
 Driving Wheel Lathe, 17*, 743†
 Non-Lifting 1908 Injector, 1258*
 Semaphore (See Signal)
 Shanghai-Nankin Rolling Stock, 522*
 Ship (See also Names of Companies):
 Calais-Dover Car Ferry, 901
 Car Floats on the N. Y., Phila. & Norfolk, 750†
 Fall River Line Steamship Commonwealth, 447
 Fastest Motor Boat, 725
 Ferry Bridges, Central of N. J., 1288*
 Fire Fighting Equipment for Tugboats, 585*
 Floating Grain Elevator, Pennsylvania R. R., 975
 New Lake Steamers, 1606
 New York Ferries Stopped, 1599
 San Francisco to Avonmouth, England, Direct, 1166
 Steamship Brazos; Mallory Line, 1111*
 Transatlantic Traffic, 1311
 Skipper (See Car Service)
 Shops:
 American Car & Equipment Co., 1269*
 A. T. & S. F. System, 463†, 511†
 Atha Steel Casting Co., 116*
 Barney & Smith, 116*
 Bettendorf Axle Co., Chicago Plant, 1171†
 Chicago Railway Equipment Co., 1222*
 C. C. C. & St. L., Beech Grove, 1245*
 Decatur Shop Notes, Wabash, 1256
 Early Locomotive Works, 914
 Efficiency, Atchison, Topeka & Santa Fe, 892†
 Electricity at Moberly Shops, Wabash, 1403
 Flannery Bolt Co., 267*
 Milwaukee Car Mfg. Co., 174*
 Motor Drive Economy, 269*
 National Machine Recorder, 1071*
 Parkersburg Iron Co., 160*
 Producer Gas Power Plant, Minn. & St. Louis, 935†, 948*, 1037†
 Preventable wastes and losses, 12*
 Shovel, Steam, 737*
 Shovel, Tubular Handle, 1670*
 Shrewsbury & Chester, Locomotive, 760*
 Siberian Railroad, 670, 683
 Side Bearings (See Bearings)
 Siemens Electric Motor Car, Midland Railway, 1005*
 Sierra Leone Government Railway, 1007*
 Signal (See also Railway Sig. Assoc.):
 Automatic Stops and Cab Signals, Ry. Sig. Assn. Report, 1202
 Cab, Simmen's, 1169
 Gilded Semaphore Blades, 1612
 History of the Storage Battery, 1198
 Kerite, 1081†, 1190
 Signal, Block (See also Ry. Sig. Assoc.; also Names of Railroads):
 Automatic Signal Recorder, 615
 Automatic Stops and Cab Signals, 1082†
 Brooklyn Bridge, 806*
 Crossing Bell and Block Signal Relays, 836*
 Electro-Gas, 161†
 Erie, Guymard Cut-Off, 1416*
 Hudson & Manhattan, 1432*
 Indications and Aspects, Ry. Signal Assn. Report, 1196*
 Improved Distant, Belgium, 892†
 Int. Rapid Transit Subway, 435, 483*
 Long Island Railroad, 534*
 Mileage Equipped in 1908, 1615†, 1638
 N. Y. C. & H. R., Park Avenue Tunnel, 1090*
 Normal Danger Patent Decision, 1366
 Three Years' Progress, 3†
 Track Circuit, Beginning of, 1060
 Washington Terminal, 1192
 Westinghouse, in the Eastern Hemisphere, 616
 Signal, Interlocking (See also Ry. Sig. Assoc.; also Names of Railroads):
 Crossing Bell and Block Signal Relays, 836*
 Erie, Guymard Cut-Off, 1416*
 First Plant in America, 992*
 Johnson's Electric, 472*
 Long Island R. R., Dutch Kills, 8*
 Long Island R. R., Rebuilding, 1254*
 Louisiana R. R. Comm. Orders, 734
 N. Y. N. H. & H. at New Haven, 1102*
 Repair, Speed Limit During, 891†, 915*
 Three Years' Progress, 3†
 Universal Auto-Combiner Interlocking, 1199*

Signal Interlocking (Continued):
 Washington Terminal, 1192
 Westinghouse, in the Eastern Hemisphere, 616
 Signalman (See Employee)
 Simmen's Signaling System, 1169
 Simon Steel Piling, 821*
 Smith Side Lever Engine, 771*
 Smokejacks:
 Cast Iron Caboose Jacks, 832*
 Phoenix, 1370*
 Wabash Roundhouse, 1302*
 Smoke Nuisance, M. M. Assoc. Discussion, 357
 Soudan Railroad, 891†
 So. Eastern Railway, Locomotive, 770*
 Southern Indiana, Cars in Service, 369‡
 Southern Mahratta Ry., 20-ton Bogie Car, 994*
 Southern Pacific (See also Harriman Lines):
 Air Brake Tests, 1466†, 1477*, 1538*
 1590*
 All-Steel Coach, 83*
 Atchafalaya River Bridge, 661*
 Electrification, 1453
 Los Angeles Shop Notes, 1388*
 Orange Train, 490*
 Rifled Pipe Line, 970
 San Francisco Holiday Traffic, 450
 Signal Plans, 1564
 Suburban Depot at Berkeley, 759*
 Ten-Wheel Locomotives, 944*
 Southern Railway:
 Annual Report, 1426†*
 Signal Orders, 1459
 South Indian Railway:
 Corridor Train, 531*
 Egmore Station, Madras, 678*
 South Manchuria Railway, 1409
 Electric Railway at Dalny, 598
 Standardizing, 803
 Spain, Gage of Principal Railroads, 1306
 Speed (See Fast Trains and Runs)
 Speed Counter, Veeder, 929*
 Spence Portable Electric Conveyors, 1172*
 Spike (See Maintenance of Way)
 Sprocket (See Machine Tools)
 Standard Car Truck Co.:
 Barber Truck, 301*
 Center Bearings, 164†, 171*
 Standard Oil Co., Rebate Case, 594, 605†, 1360
 Standard Time, 1475
 Standardization, Preventable Wastes and Losses, 12*
 State Commission Rulings:
 Indiana, Demurrage, 1496
 Indiana, Division of Rates Between Carriers, 494
 Indiana, Interchange of Cars, 1553
 Indiana, Joint Coal Rate Re-established, 450
 Indiana, Rate Reductions Withheld Pending Court Decision, 196
 Kentucky, Long and Short Haul, 1552
 Louisiana, Concentration Charges on Cottonseed, 1214
 Nebraska, Differentials on Inbound and Outbound Shipments, 1553
 Nebraska, Switching Charges at South Omaha, 1603, 1604
 Nebraska, Transfer Switch Ordered, 450
 New York, Discontinuing Station, 1552
 New York, Eleventh Avenue Trains, 1599
 New York, Express Companies' Reports, 1412
 New York, N. Y. C. & H. R. Trolleys, 825
 New York, Railroad Managers Not Presumed to be Wise, 1604
 New York, Rule for Marking L. C. L. Freight, 826
 New York, Sixth Avenue Elevated Trains, 1604
 New York, Transfer Company at Stations, 728
 Ohio, Discrimination in Furnishing Cars, 1412
 Ohio, Discriminatory Rate on Piling, 1412
 Ohio, Reasonable Notice of Shippers' Car Requirements, 402
 Pennsylvania, Baggage Transfer, Exclusive Franchise, 1361
 Vermont, Regulation of International Traffic, 1214
 Wisconsin, Carload Rate on Mixed Grain, 778
 Wisconsin, Classification of Fish Boxes, 778
 Wisconsin, Commission's Authority over Interstate Rates, 603†, 638
 Wisconsin, Experimental Trains Discontinued, 402
 Wisconsin, Motor Cars, 580
 Wisconsin, Objection to Spur Track, 496
 Wisconsin, Rates on Milk and Cream, 728
 Wisconsin, Trainload Rates Not Encouraged, 402
 State Railroad Commissions (See also names):
 Attitude, Railroad Officers on, 1653
 Betterment of, 793†
 Conference at Chicago, 199
 Five Years of Regulation by the States, 665
 Overlapping Commission Jurisdictions, 603†
 North Central Assoc. of Railway Commissioners, 1553
 Political Railroad Commissions, 984†
 State Ownership (See Government Ownership)
 Station (See also Yards and Terminals):
 Baltimore & Ohio, Wheeling, 943*
 Buffalo Union, Project Abandoned, 1656
 Central of N. J., Manhattan, 1288*
 C. & N.W., Chicago, 711*
 C. R. I. & P., Galveston Freight House, 996*
 Colo. & Sou., Galveston Freight House, 996*
 D. L. & W., at Scranton, 1335*
 Grand Central Train Shed Removal, N. Y. C. & H. R., 632*
 Kansas City Union, 1180†, 1493
 New Orleans Union, 427*
 Penna. R. R., Wilmington, Del., 589*
 Sierra Leone Government Railway, 1009*
 South Indian Railway, Madras, 678*
 South, Pacific, at Berkeley, Cal., 759*
 Washington Terminal, 1192
 Washington Union, Ventilation, 84
 Winnipeg, Man., Union, 180*
 Staybolt (See Locomotive Firebox)
 Steamer (See Ships)
 Steam Shovels, Revolving, 737*
 Steel (See Iron and Steel; also Rail; also Wheel)
 Steel-Concrete (See Concrete, Reinforced)
 Stock (See Finance)
 Stoever Fdry. & Mfg. Co., Pipe Bending Machine, 305*
 Stoever Pipe Machine, 158*, 242*, 268*, 305*
 Stokers, Mechanical (See Locomotive Fire Box)
 Storekeeping:
 Economical Care of Material, 573, 798‡
 Handling Oils on the Santa Fe, 1443*
 System in Handling Material, 964*
 Strauss, Kinzie Street Bridge, C. & N.W., 1580*
 Street Railways (See Electric Railways)
 Strike (See Employee)
 Stucki Roller Side Bearing, 1567*
 Subway (See also Tunnel; also Names of Companies):
 Berlin, 1352*
 European Conditions, 922
 New York Freight, 1131†, 1150*
 Washington Street Tunnel, Boston, 1435*
 Superheater:
 Baldwin Smokebox, 1401, 147-‡
 Boiler Barrel, 567*
 Boiler Tube, 566*
 English Locomotives, 940‡
 M. M. Assoc. Report, 315, 321
 Schmidt-Garbe, 1655
 Smokebox, Eastern of France, 390*
 Smoke Tube, 568*
 Traveling Engineers' Association Report, 851
 Use of Superheated Steam in Locomotives, 515*, 566*, 617*
 Surprise Tests (See Employee, Discipline)
 Surveying (See Construction, New; also Maintenance of Way)
 Swedish State Railroads, Electrical Operation, 551
 Switch (See also Signal, Interlocking):
 Facing Point, Penna. R. R., 38
 Johnson's Electric Movement, 472*
 Latimer Switch-Point Lock, 1668*
 Long Island R. R., Dutch Kills, 8*
 Melting Snow Around Switches, 918, 943
 Switzerland State Railroads, Traffic Density, 1014*
 Symington:
 Journal Box, 301
 Iron, 104
 T
 Tabor & Northern Experimental Motor Car, 1116
 Taff Vale Ry.:
 Motor Train, 1452*
 Tariff:
 Protectionism and Railway Regulation, 1571†
 Taxation (See also Legal Decisions):
 A. T. & S. F., Colorado, 1357
 Increased, in 1908, 743†
 Michigan, 1656
 Minnesota & International, 1493
 Oregon Assessments, 969
 Sou. Pac., Assessment in Kentucky, 1545
 Texas Railroads, 881
 Ticket, Germany, 1622
 Washington, 1159
 Tayleur & Co.'s Engine, 769*
 Tehuantepec National:
 Opened for Freight, 1550
 Telegraph (See also Assoc. of Ry. Tel. Supts.):
 First in America, 400
 Keeping Records of Small Office, 876
 Typewriter in, 399
 Telegraph Operator (See Employee)
 Telephone (See also Train Despatching):
 Paris Exchange, 1462*
 Railroad Use, 417
 Wisconsin Law, 1311
 Tender (See Locomotive Tender)
 Testing Machine, Cardwell, 104*
 Texas:
 Railroad Construction, Effects of Regulation, 557†, 562‡, 603†, 1093
 Railroad Earnings and Taxes, 877, 881

GENERAL INDEX—Continued.

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Texas R. R. Commission:
Enjoined from Discriminating, 1556
Equipment Orders Modified, 1170
More Power Wanted, 1496
Opposition to Increase in Rates, 414‡

Thermite:
Welding Locomotive Frames, 1524‡

Ticket (See Passenger Rates)

Ties and Timber (See also Forest Preservation; also Lumber):
Berg and Marche Steel, 27*
Concrete in Italy, 1368
Creosoting, Good and Bad, 1270
Creosoting, Mex. Cent., 930
Creosoted, Penna. R. R., 1504
Haarmann Steel, 28*
Longitudinal, in Concrete, 1430‡*
Post Steel, 29*
Preservation, Northern Pacific, 32
Rendel Steel, 27*
Rendel Steel, 699†, 940‡*, 1397
St. Gothard Steel, 28*
Steel and Wood Ties, 561‡, 1397
Steel, Bessemer & Lake Erie, 1398
Steel, Life of, 1‡, 24*
Track Superstructure in Tunnels, 720*
1277†, 1304*, 1384*, 1430‡*
Track-Testing Machines, 1426†

Tie Plate (See Maintenance of Way)
Time, Standard, 1475

Tire (See Wheel)

Tol. & O. Cent.:
Collision at Sugar Ridge, Ohio, 1109

Toledo, St. Louis & Western:
Instruction of Employees, 616, 744†, 990‡

Tool (See Machine Tool)
Toronto & York Radial Signals, 1169

Track (See Maintenance of Way; also Construction, New)

Track Elevation (See Grade Separation)

Tractive Power (See Locomotive Performance)

Trade Unions (See Employee)

Traffic (See also Freight Traffic; also Passenger Traffic; also Business Situation);
Co-Operation, Need of, 748‡
Density, Swiss Railroads, 1014*
Density, Train-Load and Car Load, 1906 and 1901, 5‡
Increase Due to Railroad Improvements, 744†, 895‡
Outlook for, 1909, 1641
Regulating Railroad Traffic, 1037

Train:
Delays to Passenger Trains in New York, 1016, 1261, 1493
Motor Trains on the Taff Vale, 1452*
Orange, Southern Pacific, 490*
Tourists', Great Indian Peninsula, 758*

Train Despatching:
Pointers for Train Despatchers, 1406
Rule 94, Problem, 369‡, 561‡, 610‡, 655†, 744†, 747†, 896‡
Run Late Order on Single Track, 1185‡, 1575‡
Some Facts About, 1386
Telephone, Canadian Pacific, 1357
Telephone, Chicago & Northwestern, 1101
Telephone, C. B. & Q., 363†, 377, 464‡, 572
Telephone, D. L. & W., 1210
Telephone, Ill. Cent., 38
Telephone in 1883, 463‡
Telephone, Liberty White R. R., 561‡
Telephone, Michigan Central, 724, 1656
Telephone: Telegraph Superintendents on 994, 1657
Telephone, Union Pacific, 1600
Telephone, Y. & M. V., 922
Train-Order Forms, 511‡*

Train Despatchers' Assoc., Convention, 443

Train Lighting (See Lighting)

Train Line (See Hose; also Heating)

Train Load:
Minimum Grade and Maximum Train, 749‡, 1525‡
Tonnage Computer, 767*

Trainmen (See Employee)

Train-Order:
Locked Cabinet for, 369‡

Train Pipe (See Hose; also Heating)

Train Robbery:
Great Northern, 38, 1599
Ulster & Delaware, 635

Train Rules. A. B. C., 875, 1109, 1286

Tramps:
State Colonies for, 1599

Tramways (See Electric Railway)

Transandine Railroad Rack Locomotive, 480*

Trans-Mississippi Commercial Congress Resolutions, 1216

Trans-Siberian (See Siberian Railroad)

Traveling Engineers' Assoc.:
Convention, 850
Convention Exhibits, 885

Trestle (See Bridge)

Trolley (See Electric Railways)

Truck:
Barber, 55, 301*
Bettendorf Cast Steel, 239
Bettendorf, 50 Ton, 1194*
Bettendorf, for 30-ton Stock Car, 67*
1142*
Bettendorf, Testing and Assembling, 1667*
Brill High-Speed, 330
Electric Baggage, 446*
Evolution of the Locomotive Truck, 574*
Pony Wheels, New Haven Electric Locomotives, 1472*

Trussed Concrete Steel Co.:
Hy-Rib Sheathing, 837*

Tube (See Locomotive Boiler; also Tunnel)

Tubular Handle Shovel, 1670*

Tunnel (See also Subway):
Detroit River, 58
Electric Operation of the St. Clair Tunnel, 1305*, 1308, 1346*
Erie, Otisville, 1293*

Hudson River Tunnel Supports, 447
Loetschburg Tunnel Flood, 636
St. Paul Pass, C. M. & St. P., 1096*
Track Superstructure in Tunnels, 720*, 1277†, 1304*, 1384*, 1430‡*
Tunneling Machine, 929*

Turner Const. Co.:
Reinforced Concrete Trestle and Stone Bins, 1116*

Turntable, Motor-Operated, 1614*

Two Cents a Mile (See Passenger Rate Reduction)

U

Underframe (See Car)
Underwood & Co.:
Crank Pin Turner, 269*

Union Pacific (See also Harriman Lines):
Collision at Borie, Wyo., 1406, 1600
Derailment, near Hermosa Junction, Wyo., 1210
Government Suit Against, 1494

Union Spring & Mfg. Co.:
Kensington Journal Box, 252*

Union Switch & Signal Co.:
Brooklyn Bridge Block Signals, 806*
Electric Track Indicator, N. Y., N. H. & H., 1105*
Erie Signals, 1416*
Interlocking, Long Island R. R., 8*, 1254*
Interlocking, N. Y., N. H. & H. at New Haven, 1102*
Long Island R. R., Block Signals, 534*
Signals for Hudson & Manhattan, 1432*
Washington Terminal Signalling, 1192

Unit Costs of Railroad Building (See Construction, New)

U. S. Express Co., No Extra Dividend, 1212

U. S. Metal & Mfg. Co.:
Steel Pole for Line Construction, 1422

U. S. Sherardizing Process, 272*

United States Steel Corporation:
Earnings, Quarter Ended September 30, 1272

Universities (See names)

Uruguay:
Railroad Extensions in, 1409

V

Valuation (See Finance)
Valuation of Railroads: 587, 627
Cost, 1906 and 1901, 5‡
I. C. C. Statistician's Report, 1029†
Missouri, 725
N. Y., N. H. & H., 1081†
Oregon Railroad & Navigation Co., 1357
Washington, 492, 1453, 1550
Wisconsin, 1242‡

Valve:
Anderson Controlling Altitude Valve, 1464*
Ashton Safety Valve, 303*
Baker-Pilliod Gear, 303*
Blow-Off, Ashton, 338*
Compound Locomotive, Starting, 191*
Ritchie's Safety Valve, 1383‡*
Safety Valves, M. M. Assoc. Report, 343, 353
Steam Reversing Gears, 855
Piston vs. Slide, 30
Young Rotary Valve and Gear, 1342*

Vanadium Steel, 278

Van Dorn Steel Car End, 240*

Vaughan, H. H., 343†

Veeder Mfg. Co.:
Speed Counter, 929*

Velocipede Car, Simplex, 978

Ventilation:
Car Ventilating Device, 66*
Draft Fans, Birmingham Ry. Plant, 114*
New York Subway, 799
Passenger Cars, 244†, 253*
Steam Fan Regulator, 1507*

Washington Union Station, 84

Viaduct (See Bridge)

Victorian Railways, 959
Electrification of Melbourne Suburban Lines, 972, 1295*, 1355*, 1399*, 1433*, 1474*, 1527, 1579*

Virginian Railway:
Mikado Locomotive, 420*
Standard Freight Car, 51†, 60*

Vulcan Steam Shovel Co.:
Revolving Steam Shovel, 737*

W

Wabash:
Annual Report, 988†*
Coal and Ash Handling Gantry, 833*
Decatur Shop Notes, 1256
Electricity at Moberly Shops, Wabash, 1403
Locomotive Terminal at Decatur, 1298*
Prairie Locomotive, 536*

Wagner Elec. Co., Electricity at Moberly Shops, Wabash, 1403

Walbank, R. T., Testimonial, 1464*

Washburn 6-yd. Dump Car, 550*

Wages (See Employee)

Washington:
Valuation of Railways, 492, 1453, 1550

Wash., Balt. & Annapolis, Collision near Annapolis, 89

Wash. Term. Co.:
Cost and Description, 1192
Gravity Measuring Coal Chute, 518*
Signals, 1169, 1192

Waterproofing:
Refrigerating Work, 1613

Water Purifying Apparatus for Locomotives, 389*

Water Service Plant, Delaware Water Co., 582*

Waterways:
Commission, 206
Deep Waterway Convention, 1162
Water Transportation, 1164

Welding:
Flue Welder, Ryerson, 158*
Locomotive Frames, 1491, 1524‡
Oxy-Acetylene Welding and Cutting Tool, 265, 967*

West African Government Railways, 1007*

Western Elec. Co., Paris Telephone Exchange, 1462*

Western of France, State Ownership, 411†

Western Pacific, 881†, 902*

Westinghouse Air Brake Co.:
Air Compressor Plant, 40*
Tests of Friction Draft Gear, 130†, 148*, 557†
Sou. Pac. Air Brake Tests, 1466†, 1477*, 1538*, 1590*
Triple Valves, 1466†, 1477*, 1538*, 1590*
Vacuum and Automatic Brakes, England, 385*

Westinghouse Brake Co. (London), Signals Installed, 616

Westinghouse Electric & Manufacturing Co. (See also British Westinghouse Electric & Manufacturing Co.):
Controller Patent Decision, 734
Electric Operation of the St. Clair Tunnel, 1305*, 1308, 1346*
Motor Driven Circular Saw, 886*
Motor Friction Brake, 1422*
Motor Operating Turntable, 1614*
Penna. R. R. Electrification Contract, 1320
Reorganization, 501, 1070, 1461, 1504, 1565
Single-Phase Roads Equipped, 1404
Tool Grinder, Electrically Driven, 1570*

Westinghouse Machine Co.:
Gas Engines at Gary, 1207*

Wharton, Wm., Jr., & Co.:
Guard Rail Clamp, 1171*
Manganese Steel Crossing, 1223*

Wheat (See Grain)

Wheel:
Cast Iron, 70*, 167†, 371†, 941†, 1036‡
Cast Iron, M. C. B. Report, 211†, 221*, 243†
Cast Iron, Service, C. M. & St. P., 1517†
Flange Stresses, 519
Flat Spots on Car Wheels, 1426†, 1451*, 1471†*
Flat Wheels, New York City Ordinance, 1545
Lubrication of Driving Wheel Flanges, 396*, 608‡*

Steel, Safety and Economy, 165†
Stresses on Car Wheels, 1157, 1334†

White & Co., J. G., Manila Railway, 762*

White Pass & Yukon. Consolidation Type Locomotive, 756*

Whiting Foundry Equipment Co., Cupola, 1318*

Williams, White & Co., Louisville & Nashville Coal Chutes, 848*
 Wire, Rubber Covered, Railway Signal Assn. Report, 1081, 1190
 Wisconsin:
 Public Utility Commission, 1599
 Valuation of Railroads, 1242†
 Wisconsin Central, Signal Orders, 1069
 Wisconsin Ry. Comm., Legislation Asked, 1550
 Wood (See Ties and Timber; also Lumber)
 Wood's Corrugated Firebox and Flexible Tube Plates for Locomotive Boilers, 1204*
 Wood's Hose Protector, 157*, 1568*
 Wood's Truing Devices, 1568*

Works (See Shops)
 Wrecking Crane (See Hoisting and Conveying)
 Wyandotte Company, 1666
 Y
 Yale & Towne, Electric Hoist, 266*
 Yale Locomotive Front End Pipes, 271*
 Yards and Terminals:
 Central of N. J., Manhattan, 1288*
 C. R. I. & P., Galveston, 995*
 Chicago Switch Tracks, 1546
 Colorado & Southern, Galveston, 995*
 Kansas City Union, 1180†

Yards and Terminals (Continued):
 New York Freight Subway, 1131, 1150*
 Roundhouses at La Villette, Paris, Eastern of France, 393*
 Seaboard Air Line, Tampa, Fla., 845
 Wabash Locomotive Terminal at Decatur, 1298*
 Washington Terminal, 1192
 Winnipeg, Man., 180*
 Yazoo & Mississippi Valley, Fined for Collision, 1406
 York Cross Rolled Rails, 475*
 Young Valve and Gear, 1342*
 Z
 Zenoleum Comp. Air Sprayer, 259*

NEW PUBLICATIONS.

Aberle's Railroad, Financial, Commercial and Statistical Wall Map of the United States and of parts of Canada and Mexico, 1574
 American Street Railway Investments, 560
 Autogenous Welding of Metals, 414
 Betterment Briefs, 893
 Biographical Directory of Officials of the Atchison, Topeka & Santa Fe, 989
 Brief on Railway Rate-Making Legislation, 462, 510
 Brazilian Year Book for 1908, The, 989
 Bridge Engineering; Roof Trusses, 1383
 Bulletins of the Engineering Experiment Station, 1471
 The Confessions of a Railroad Signalman, 1089
 Construction and Maintenance of Railway Roadbed and Track, 794
 Conversations on Electricity, 1035
 Cours d'économie politique professé à la Ecole nationale des Ponts et Chausées par C. Colson, Conseiller d'Etat, 606
 Die Dampflokomotiven der Gegenwart, 164
 Diamond Bars for Concrete Steel Construction, 164
 Digest to Decisions under Act to Regulate Commerce, 1241
 Directory to the Iron and Steel Works of the United States—Canadian Supplement, 1574

Dynamo-Electric Machinery, 747
 Electrical Engineer's Pocketbook, 746
 Electrical Railroading as applied to Steam Railways, 367
 Elements of Railroad Track and Construction, 1332
 Gould Railroad Lines, 414
 A Government Railroad Holding Company, 368
 Handbook of Mathematics for Engineers, 560
 How to Use Slide Rules, 368
 Hydro-Electric Developments, 1241
 Intercorporate Relationships of Railways in the United States, 1185
 Limitations of the Right to Strike, 1572
 Locomotives à Vapeur, 1240
 Manual for Engineers, 989
 Manual of Statistics, 368
 Massentransport, 510
 Methods of Earthwork Computations, 1240
 Moody Manual of Railroad and Corporation Securities, 1908, 989
 Ocean Carrier, The, 1429
 Open and Prepay Stations, Official List of, 1333

Practical Earthwork Tables, 4
 The Principal Species of Wood, 794
 Principles of Mechanics, The, 1035
 Proceedings of the Ninth Annual Convention of the American Railway Engineering and Maintenance of Way Association, 895
 The Progress of Electric Telegraphy, 414
 The Public's Responsibility for Railway Accidents, 368
 Railroad Reorganization, 462
 The Railroad Signal Dictionary, 652
 Railway Organization and Working, 794
 Railway Signaling, 560
 Railway Track and Track Works, 1135
 Reinforced Concrete, 895
 Secondary Stresses in Bridge Trusses, 1429
 The Signal Engineer, 368
 The Six-Chord Spiral, 1089
 Steel Car Designs, 896
 Tests of Concrete and Reinforced Concrete Columns, 845
 Tests of a Liquid Air Plant, 368
 The 20th Century Toolsmith and Steel-Worker, 697
 Typical Steel Railway Bridges, 1429
 Veteran Association of the Nickel Plate Railroad, 368

INTERSTATE COMMERCE COMMISSION RULINGS.

[See also General Index.]

Anthony Wholesale Grocery Co. vs. Atchison, Topeka & Santa Fe et al, 194
 Anthony, William H., vs. Philadelphia & Reading et al, 1551

The Banner Milling Co. et al vs. the New York Central & Hudson River, 687
 Beekman Lumber Co. vs. St. Louis Southwestern, 1496

Benton Transit Co. vs. Benton Harbor-St. Joe Railway & Light Co., 43
 Geo. D. Burgess et al vs. the Trans-Continental Freight Bureau et al, 194

Carstens Packing Co. vs. Northern Pacific et al, 1551
 Cleveland, Cincinnati, Chicago & St. Louis vs. Southern Indiana, 494

Corn Belt Meat Producers' Association vs. Chicago, Burlington & Quincy et al, 727

East St. Louis Walnut Co. vs. Chicago, Rock Island & Pacific et al, 1551
 Charles England & Co. vs. Baltimore & Ohio, 194

Flint & Walling Mfg. Co. vs. Grand Rapids & Indiana et al, 1456
 Florida Fruit & Vegetable Shippers' Protective Association vs. Atlantic Coast Line et al, 778

Fort Smith Traffic Bureau vs. St. Louis, & San Francisco and Illinois Central, 194

Hecker-Jones-Jewell Milling Co. vs. the Baltimore & Ohio, 593

Kansas City Hay Dealers' Association vs. Mo. Pac. et al, 1658

La Salle & Bureau County Railroad vs. Chicago & North-Western, 195
 Leonard vs. Kansas City Southern and the Kansas City & Westport Belt, 87

MacBride Coal & Coke Co. vs. St. Paul, Minnesota & Omaha, 194
 Marshall Michel Grain Co. vs. Missouri Pacific, 194

New Albany Furniture Co. vs. Mobile, Jackson & Kansas City, and same complainants vs. St. Louis & San Francisco et al, 195

New York Commercial Club vs. Chicago & North-Western and Chicago, Burlington & Quincy, 450

New York Hay Association vs. Pennsylvania Railroad and others, 545

Oregon & Washington Lumber Manufacturers' Association vs. Union Pacific et al; Pacific Coast Lumber Manufacturers' Association et al vs. Northern Pacific et al; Southwest Washington Lumber Manufacturers' Association vs. Northern Pacific et al, 401

Pacific Coast Manufacturers' Association et al vs. Northern Pacific Railway Co. et al, 102

Oshkosh Logging Tool Co. et al vs. Chicago & North-Western et al; Termatt & Monahan Co. et al vs. Wisconsin Central et al; Oshkosh Logging Tool Co. et al vs. Chicago, Milwaukee & St. Paul et al, 494

Ottumwa Bridge Co. vs. Chicago, Rock Island & Pacific, 494

Payne-Gardiner Co. vs. Louisville & Nashville, 195

Phillips-Trawick-James Co. et al vs. Southern Pacific, 196

Potlatch Lumber Co. et al vs. Northern Pacific, 402

Pueblo Transportation Association vs. Southern Pacific, 401

The Queen Coal & Mining Company vs. Southern Indiana and Chicago & Eastern Illinois, 450

Rail and River Coal Co. vs. Baltimore & Ohio, 401
 Randolph Lumber Co. vs. Seaboard Air Line et al, 195

Rhineland Paper Co. vs. Northern Pacific & Chicago & North-Western, 194
 P. J. Rice vs. Georgia Railroad, 402
 Romona Oolitic Stone Co. vs. Chicago, Indianapolis & Louisville, 87

Sylvester, R. A., vs. Pennsylvania et al, 1552

J. W. Thompson Lumber Co. and 13 other complainants vs. Illinois Central, Yazoo & Mississippi Valley and St. Louis Iron Mountain & Southern, 195

Topeka Banana Dealers' Association vs. St. Louis & San Francisco et al, and Missouri Banana Dealers' Association and Kansas Shippers' Association vs. St. Louis & San Francisco et al, 195

Traffic Bureau Merchandise Exchange of St. Louis vs. Chicago, Burlington & Quincy and same vs. Missouri Pacific, same vs. St. Louis & San Francisco, same vs. Chicago, Rock Island & Pacific and same vs. Missouri, Kansas & Texas, 593

Ullman, Joseph, vs. Adams Express Co. et al, 1603
 Union Pacific Tea Co. vs. Pennsylvania et al, 1551

Vermont State Commission vs. Canadian Pacific, 1214
 Victor Fuel Company vs. Atchison, Topeka & Santa Fe, 494

Western Oregon Lumber Manufacturers' Association et al vs. Southern Pacific et al, 401

Wholesale Fruit & Produce Association vs. the Atchison, Topeka & Santa Fe et al, 687

Wilson Produce Co. et al vs. Pennsylvania Railroad, 637

STATE COMMISSION RULINGS.

[See also General Index.]

Indiana, Winona Interurban Railway vs. Cleveland, Cincinnati, Chicago & St. Louis, 1553

Limited Liability of Carriers

Nebraska: Chicago Lumber Co. et al vs. Chicago, Burlington & Quincy, 1553

In re application of Union Stock Yards Co. for permission switching rates at South Omaha, 1604

New York, Board of Trade of Danville vs. Delaware, Lackawanna & Western, 1604

Ohio: Callahan & Son, J. M., vs. Cleveland, Cincinnati, Chicago & St. Louis, 1412

The Carbon Coal Mining Co. vs. Marietta, Columbus & Cleveland, 1412

Vermont, Re Notice to Canadian Pacific to show cause why its Train No. 13 should not be delayed at Richford, Vt., until 8:15, for the purpose of connecting with Central Vermont Train No. 55, 1214

ELECTIONS AND APPOINTMENTS.

[Portraits are indicated thus*.]

Abbey, F. G., 1557
 Abbott, W. W., 1371
 Abel, W. H., 838
 Ackert, C. H., 1499
 Ackworth, H. J., 838
 Adams, A. C., 1226
 Adams, E. C., 92
 Adams, J. W., 1025, 1119
 Adams, L. E., 92
 Adreon, E. L., 1022
 Aldcorn, Thomas, 107*
 Alexander, E., 563
 Allfree, E. H., 977
 Ailen, George J., 1225
 Allen, James, 94, 408
 Allen, J. A., 1025
 Allen, P. C., 1272
 Allen, W. K., 785*
 Allison, J. W., 692
 Allison, R. H., 1459
 Almand, J. R., 504
 Ames, Azel, 1566*
 Ames, Capt. Azel, 1558
 Anderson, Charles, 1074
 Anderson, George K., 1558
 Anderson, J. T., 94
 Anderson, R. B., 786
 Andrews, C. W., 45
 Andrews, J. H., 1558
 Andrews, R. W., 1320
 Annable, W. G., 1607
 Armitage, Percy P., 1417
 Armstrong, W. F., 1499
 Armstrong, W. R., 1320
 Arthurs, W. C., 201
 Arundel, J. C., 1225
 Asbury, D., 1273
 Ashby, E. B., 94
 Ansley, H. C., 552
 Archibald, Bert, 1418
 Ardley, W. H., 979
 Arnold, A. W., 1372
 Arnold, C. S., 887
 Arundel, J. T., 552
 Asterlin, C. A., 786
 Atkill, W., 785
 Austin, C. A., 1371
 Auten, J. C., 1460
 Averell, W. H., 1119
 Averitt, J. T., 1320
 Avlinger, Joseph, 1459
 Ayers, A. R., 1174, 1372

Bates, T. V., 1219
 Baughan, T. M., 1174
 Baxter, R. W., 1119, 1371, 1417*
 Beard, J. B., 1372
 Bebe, James, 786
 Beck, H., 1174
 Beckler, W. A., 786, 838
 Beckley, S. G., 837
 Beckwith, T. L., 552
 Beecher, R. S., 1315
 Behring, F. H., 1025
 Belding, Richard A., 1174, 1273
 Bell, G. T., 786
 Bell, William, 1024
 Belt, H. B., 1119
 Bender, W. F., 552
 Benjamin, Charles H., 202
 Benedict, J. L., 201
 Bennett, D. P., 1073
 Bennett, J. C., 1566
 Bennett, J. L., 1499
 Bennett, William, 1499
 Berg, L. S., 979
 Best, E. P., 786
 Bickford, C. W., 92
 Bicknell, Melville O., 45
 Bills, H. J., 739
 Birkholz, B. L., 1606
 Birney, F. O., 1607
 Blabon, J. W., 597
 Blair, Geo. A., 1273
 Blaasdell, A. J., 1025 (1025), 887
 Bland, Charles A., 739, 887
 Blair, E. B., 552
 Bliss, Chester W., 1073
 Bliss, William, 1073
 Blount, F. P., 1024
 Boardman, Dixon, 928
 Boardman, Francis, 1226
 Boden, John, 1663
 Bofinger, W. H., 1505
 Bohanan, W. J., 1025
 Bonn, H. A., 692
 Bonnyman, Alex., 553, 1460
 Borland, E. J., 1074
 Botsford, J. L., 1024
 Bourne, L. S., 94, 552
 Bowen, E. I., 455, 598
 Bower, Edwin, 45
 Bower, S. L., 1372
 Bowes, Joseph, 1372
 Bowie, H. T., 786
 Bowman, Frank, 786
 Boyer, W. L., 1316
 Bracken, E. P., 739
 Brady, A., 739
 Brady, E. D., 208
 Bralne, F. L., 1316
 Brennan, J. D., 837, 1499
 Brennan, Thomas, 1073
 Brent, Theodore, 93, 454*
 Brewer, G. W., 1074
 Brewer, H. H., 646, 837
 Britney, E. E., 1025
 Brixey, A. D., 1268
 Brixey, R. D., 1268
 Brixey, R. W., 1268
 Broadbent, J. H., 553
 Brody, L. S., 786
 Brooks, F. S., 455, 504
 Brooks, R. C., 786
 Browder, G. R., 1025
 Brown, B. E., 1267, 1421
 Brown, C. B., 1120
 Brown, D. P., 979, 1073
 Brown, H. A., 1315
 Brown, E. N., 646
 Brown, F. B., 408
 Brown, Geo. McL., 1607
 Brown, H. H., 886
 Brown, H. H., 1558
 Brown, H. H., 739
 Brown, H. W., 692
 Brown, O. M., 553
 Brown, W. G., 1367
 Browne, F. E., 1073, 1119
 Bruner, C. L., 1557
 Bryan, J. W., 786
 Buchanan, C. W., 1024
 Buchanan, S., 503
 Buck, A. E., 1074
 Buck, C. A., 1367
 Buford, R. F., 786
 Bulling, W. B., 94

Bunstein, L. J., 1119
 Burford, R. A., 1073
 Burgess, E. C., 553
 Burk, W. H., 1273
 Burke, F. J., 552, 739
 Burkhalter, Dennis, 1606, 1663
 Burkhead, S. E., 1606
 Burns, J. T., 1459
 Burns, Sr., T. J., 838
 Burroughs, F. D., 1273
 Burt, A. Judson, 1272
 Burt, Horace G., 1662
 Bush, Lincoln, 1558, 1663
 Butler, Edwin, 94
 Butler, L. E., 1218
 Butterfield, H. N., 786
 Byers, D. J., 887, 1025, 1372
 Byers, P. H., 979, 1073
 Byrne, R. W., 1459

Cage, B. C., 1173
 Cage, Day, 692
 Cage, H. H., 887
 Calef, E. H., 979
 Call, C. A., 553
 Call, J. B., 1663
 Calloway, B. G., 646
 Cameron, Allan, 1557, 1607
 Cameron, D. M., 207, 1118, 1225
 Cameron, L. O., 107*
 Campbell, B. A., 1024
 Campbell, R. B., 1460
 Campbell, R. F., 1074, 1174
 Campbell, W. W., 1174
 Campion, J. J., 786, 838
 Canfield, Arthur R., 1174
 Cantile, George S., 1498
 Cantly, J., 456
 Card, W. A., 598
 Carden, R. G., 785
 Cardwell, G. A., 739
 Carlton, J., 1174
 Carnohan, W. J., 692
 Carpenter, A. E., 1565
 Converse, E. C., 1565
 Carpenter, A. H., 1613
 Carpenter, Myron J., 837
 Carrick, H., 1499
 Carrick, Henry, 979
 Carrigan, Walter D., 1173
 Carroll, J. T., 1174
 Carroll, W. V., 45, 599
 Carson, C. E., 45, 455
 Carson, C. W., 553
 Carson, G. E., 1025
 Carter, F. M., 504
 Carter, G. A., 1320
 Case, J. F., 830
 Casey, J. F., 1174
 Casey, Thomas, 1371
 Cass, L. S., 504
 Causey, W. B., 503, 504
 Cawley, J. T., 1420
 Center, E. S., 1557
 Chadwick, R. A., 1372, 1417
 Chamberlain, H. B., 646
 Chears, W. O., 1025
 Chilson, E. N., 1667
 Chipley, L. B., 1074, 1174
 Chisholm, W. T., 646
 Christie, C., 887
 Christman, B. J., 1558
 Chudleigh, E. L., 1119
 Church, W. E., 1119
 Clark, A. B., 1460
 Clark, C. H., 549
 Clark, F. E., 1025
 Clark, J. J., 504
 Clarke, F. M., 1498
 Clausen, Alberto, 887
 Clausen, L. R., 1191*
 Clawson, W. C., 739, 887
 Clendenning, F. H., 1119
 Clifton, Randall, 1025
 Clifton, W. D., 1073
 Clouston, E. S., 552
 Clover, N. W., 1173
 Cockrell, E. P., 837
 Cody, W. F., 1025
 Cole, Edward C., 1558
 Cole, T. O., 1367
 Coleman, C. P., 1607
 Coleman, D. C., 552, 1606, 1663
 Collette, G. F., 1225
 Collier, S. P., Jr., 739

Collins, A. B., 1073, 1174
 Collins, H. H., 785
 Collyer, Robert N., 1025, 1073
 Comer, W. H., 207, 455, 1607
 Comfort, R. E., 1663
 Cone, F., 1174
 Conneely, E. K., 1321
 Connelly, J. H., 1558
 Conner, T. J., 1321
 Conrath, F. J., 1321
 Constans, J. F., 1417
 Converse, W. A., 597
 Cook, A. R., 979
 Cook, Jr., C. W., 1607
 Cooke, G. A., 1459
 Coombe, G. B., 599
 Coomer, H. A., 1272
 Cooper, G. A., 107*
 Copland, James, 886
 Coppage, T. B., 455
 Corbett, J. F., 1272
 Corliss, William, 1074
 Cornell, W. D., 646
 Cornell, W. S., 1558
 Cory, E. L., 1073
 Cost, C. E., 1025
 Costello, J., 1272
 Cotterman, W. S., 1499
 Courtney, Geo. L., 1119
 Covert, G. W., 1606
 Covert, W. T., 1418, 1460
 Covil, W. B., 1566
 Cowans, Percy, 552
 Cowling, R. O., 979
 Coyle, B. H., 1073
 Coyle, E. J., 979
 Cozart, J. B., 1499
 Cozzens, J. J., 646
 Craig, F. E., 1566
 Crane, C. S., 786
 Crary, G. W., 979
 Crawford, D. T., 1607
 Crawford, H. W., 94
 Crooks, J. R., 455
 Crosby, B. L., 979
 Cross, T. C., 1558
 Crow, W. R., 94
 Crowell, F. N., 504, 692
 Crown, M., 1371
 Crownover, G. M., 1120
 Cruse, S. E., 1663
 Cull, E. H. B., 1226
 Cummings, J. H., 1273, 1372
 Cummings, J. P., 94
 Cummings, W. P. F., 455
 Cunerty, T. M., 408
 Cunningham, A. O., 553
 Curley, M. S., 1074
 Cutter, M. B., 1320, 1371
 Cuyler, G. W., 1174

Dailey, G. W., 1499
 Dalther, C. P., 1558
 Dale, D., 1174
 Daley, D. B., 1225
 Daly, C. F., 1459
 Daly, E. B., 1119
 Dambach, C. O., 408
 Darling, E., 1459
 Darlow, Alfred, 887
 Darrow, Alfred, 888
 Darrow, F. T., 1372, 1663*
 Daves, G. W., 1026
 Daves, William, 1026
 David, G. F., 1024
 Davidson, A. J., 552
 Davies, W. Z., 552
 Davis, W. W., 1498
 Davis, G. H., 409
 Davis, DeWitt, 207
 Davis, George W., 887
 Davis, J. M., 207, 598*
 Davis, W. E., 786
 Davis, W. L., 1025
 Davis, William, 887
 Davis, William J., 1663
 Davis, W. W., 1120
 Dawson, T. J., 1119
 Day, C. R., 1421
 Dazé, William, 1321
 Daze, W. M., 1025, 1074
 De Armond, F. L., 106*
 Decker, M. S., 1173
 DeFriest, J. B., 1073
 DeJong, C. V., 597
 Delany, A. G., 1268
 Demburger, Herman, 208
 Dever, F. H., 692
 DeWitt, W. H., 1174
 Dickeson, O. L., 1606
 Dickinson, H. E., 1025
 Diehl, George W., 1558
 Dill, J. R., 785
 Dill, S. J., 598
 Dillard, J. C., 599
 Dillon, J. R., 455, 504, 692, 1110
 Dixon, John W., 886
 Douglas, H. T. Jr., 408
 Dousman, B. A., 552, 646
 Dowle, E. J., 1174
 Downing, W. E., 504
 Dozier, R. M., 979
 Drane, R. L., 979
 Drennan, Thomas, 838
 Dressell, H. M., 207, 504
 Drummond, Sir George, 552
 Drummond, Huntley, 552

Drysdale, H. S., 45
 Duane, W. M., 1069
 Duane, William, 1074
 Dudley, A. M., 599
 Dudley, W. F., 646
 Duemler, G. F., 1565
 Duff, A. E., 1025
 Duff, R. C., 552
 Duffy, Geo. J., 1372
 Duke, H. G., 837
 Dunbar, J. R., 979
 Dunham, H. B., 1073
 Dunham, T. P., 1460
 Dunn, Seeley, 201
 Dunning, S. Wright, 542
 Durrell, D. J., 504
 Dyer, J. H., 1119

Eade, Geo., 45
 Eager, A. H., 1607
 Earling, H. B., 207
 Easby, D. T., 1558
 Easton, Frederick, 1024, 1025
 Easley, K. A., 1024
 Eddy, C. M., 1565
 Edgerton, E. D., 207
 Edmonds, J. D., 1169, 1268
 Edmonds, J. F., 92
 Edmonson, B. N., 1225
 Edwards, J. L., 979
 Edwards, W. R., 1372
 Edwin, F. K., 646
 Elkel, Charles, 1119
 Elsimer, F. A., 1025
 Elden, Edward, 1418, 1421
 Elder, F. W., 504
 Eldridge, W. T., 1173
 Elliott, F. S., 1272
 Elliott, R. N., 1557
 Ellis, G. E., 46, 92
 Elwood, J., 837
 Ely, T. N., 1558
 Emerson, H. D., 785
 Emmart, J. A., 45, 455
 England, W. E., 1557
 England, W. H., 977
 Ennis, John W., 1418
 Ensign, Ely, 786
 Escott, Paul, 1273
 Espenashade, E. B., 1074
 Estes, J. E., 1372
 Etchberger, J. S., 1320, 1417
 Evans, E. B., 1558
 Evans, J. J., 1026
 Evans, R., 1321
 Everett, G. W., 1272
 Everheart, H. E., 786
 Ewing, C. L., 94
 Eyster, C. F., 787

Faber, A. G., 46
 Fahnestock, James F., 1606
 Fairbairn, J. M. R., 1120
 Fairlamb, J. F., 1320
 Falkenbach, H. J., 504
 Farmer, Thomas, 201
 Faust, Frank, 1119
 Fearey, F. T., 1316
 Feeley, T. M., 787
 Felser, R. L., 1505
 Ferguson, O. G., 94
 Ferguson, G. W., 46
 Ferris, James M., 1073
 Ferris, W. B., 1558
 Fidler, W. H., 1459
 Filluel, Gabe, 1119
 Finch, F. N., 552
 Finch, J. C., 1074, 1174
 Finley, W. W., 552
 Fischer, E. B., 94
 Fisk, Wilbur C., 207
 Fitch, W. E., 1273
 Fitch, Edward, 1074
 Fitch, Hudson, 1025, 1074
 Fitzgerald, Thomas, 503
 Fitzgerald, W. T., 553
 Fitzpatrick, J. A., 1025
 Fitzsimmons, R., 553
 Fitzsimmons, William P., 1418
 Flanagan, P. R., 1074
 Flett, J. C., 201
 Fleming, J. M., 1558
 Fletcher, C. B., 207
 Flett, T. R., 1606
 Flint, H. T., 598
 Floyd, G. C., 837
 Frelinghuysen, G. G., 1316
 Folds, G. R., 1367
 Follen, Thomas, 1025
 Foss, L. M., 207
 Foster, Benjamin B., 1118
 Foster, C. B., 979
 Foster, Frederick, 1173
 Foster, George S., 1074
 Foster, G. W., 1372
 Fowler, F. S., 1118
 Fox, M. J., 739
 Foy, G. C., 1174
 Franks, Thad, 1320
 Frazier, F. P., 207
 Freeborn, D. D., 1662
 Frost, W. J., 1119
 Fry, L. H., 977
 Fuller, R. B., 1367
 Fulmer, R. E., 553
 Fulton, G. T., 1607
 Fyfe, R. C., 45, 94

Gage, J. M., 598
 Gairns, A. H., 979, 1025
 Gallagher, J. H., 1119
 Galloway, A., 1557
 Gardner, R. L., 1024
 Gardner, Henry, 787
 Gardner, J. T., 1120
 Gates, E. M., 1024
 Gauvin, W. E., 739
 Gayley, James, 1504
 George, W. A., 1025, 1558
 Glague, A. J., 686
 Gibson, E. E., 94
 Gibson, H. N., 887, 1119
 Gibson, J. B., 598
 Gill, A. M., 1321
 Gill, Charles F., 207
 Gill, Thomas H., 1173
 Gilliland, J. R., 598, 786
 Gimpel, J. H., 553, 740
 Ginnet, Jr., J. H., 1273
 Gipple, G. A., 1499
 Giraud, J. A., 692
 Girten, W. G., 838
 Gleason, E. M., 786
 Glines, G. M., 886
 Goforth, E. G., 1174
 Goggin, L. E., 92
 Golden, Robert M., 553
 Goldie, F. W., 1320
 Golding, Charles D., 1417, 1558
 Gordon, J. R., 1461
 Gossett, J. G., 1558
 Gourley, R. T., 1499
 Gossett, C. E., 787
 Govan, J. F., 1273
 Gowan, J. F., 1174
 Grace, E. G., 1367
 Grace, H. E., 787
 Graham, A. G., 1174
 Grammer, Capt. G. J., 1459
 Grant, F. T., 1273
 Grant, S. C., 979
 Graves, C. M., 1320
 Graves, J. P., 1320
 Gray, Allen, 1667
 Gray, H. S., 977
 Gray, J. G., 553
 Graybell, G. M., 1417
 Greding, M. A., 1025
 Greer, J. A., 1169
 Green, Nathaniel, 1073
 Green, F. C., 201
 Green, W. E., 1118
 Green, W. H., 928
 Greenway, T., 1073
 Greer, B. W., 94, 455
 Grewe, H. F., 408
 Griffin, E. O., 886
 Griffin, F. O., 786
 Griffin, G. H., 1073
 Griffin, T. A., 453
 Griffith, Charles, 207
 Griffith, James A., 1120
 Groner, J. A. C., 1118
 Groom, G. W., 1174
 Grosscup, B. S., 1024, 1073, 1118
 Grundy, F. L. S., 785
 Guedry, G. E., 1273
 Guest, C. L., 887
 Guest, R. A., 838
 Guffey, J. W., 1025
 Gutelius, F. P., 1024, 1174*
 Guthrie, F. S., 1498, 1499
 Gutierrez, V. M., 786
 Guttridge, S. E., 977
 Guttery, J. W., 785
 Guyot, J. H., 1119
 Guyton, J. R., 979
 Gwyn, J. G., 504

Hackley, G. R., 786
 Hadcock, C. W., 92
 Hagenbuch, J. D., 1367
 Haggart, W. R., 92
 Halle, B. M., 1607
 Hailey, J. W., 455
 Hair, Harry J., 1499
 Haldane, W. R., 455, 786
 Hale, H. E., 456
 Hale, H. H., 646, 787
 Hall, G. Roy, 45, 207, 455
 Hall, J. S., 504
 Hall, Richard C., 44
 Hall, W. F., 1459
 Halliday, J. O., 552
 Halligan, H. A., 1316
 Hallisley, J. T., 207
 Hamilton, W., 599
 Hamilton, W. Oscar, 207
 Hammill, J. F., 1565
 Hanford, J. M., 785
 Hanna, D. B., 598
 Hannahan, J. J.
 Hanson, A. S., 1320
 Hanna, S. E., 979
 Hanson, J. F., 646
 Hardie, J. S., 979
 Harley, J. W., 504
 Harlow, E. H., 1025
 Harmen, H. L., 1118, 1225
 Harriman, F. B., 94
 Harrington, C. O., 1558
 Harrington, T. F., 504, 598
 Harris, J. D., 1418, 1420, 1499*
 Harris, R. C., 456
 Harrison, Fairfax, 552

Maltby, G. B., 1069
 Manning, J. H., 201
 Mapes, T. A., 646
 Markey, Peter L., 1225
 Markham, J. T., 1461
 Marsh, G. C., 1069
 Marshall, E., 455
 Martell, L. H., 92
 Massey, G. B., 1315
 Masters, R. E., 782
 Masters, W. W., 599
 Martin, James, 887
 Martin, K. L., 1607
 Massey, A. F., 1417
 Matthews, H. F., 1024
 Maury, W. L., 886
 May, T. M., 1069
 Maxfield, George D., 455, 646
 Maxwell, P. B., 1174
 Maxwell, Wm. C., 504
 May, H. C., 887
 Mead, Geo. M., 979
 Meath, W. F., 1607
 Meffaffey, T. E., 1606
 Mehan, W. C. C., 886
 Melghen, Robert, 207
 Meigs, J. F., 1367
 Melly, H. S., 1118
 Melenhacker, J. C., 1224
 Melin, C. A., 1226
 Mendes, A. de Sola, 785
 Menzel, W. G., 1273
 Merchant, W. S., 552, 599
 Meroney, James E., 1119
 Merry, A. C., 888
 Meyers, D. E., 1372
 Milbourne, S. C., 1119
 Miller, A. C., 553
 Miller, Henry, 552
 Miller, J. N., 1417, 1450
 Miller, L. N., 1120
 Miller, R. C., 692
 Miller, William, 1022
 Miller, W. E., 1024
 Miller, W. O., 1225
 Milligan, S., 1321
 Mills, H. L., 830
 Minor, James A., 1498
 Mitchell, A. J., 598
 Mitchell, A. S., 884, 1667
 Mitchell, J. A., 599, 739
 Mixsell, A. D., 1367
 Modisett, W. C., 1663
 Moe, Frank L., 646
 Moler, A. L., 1074
 Monay, William, 552
 Monroe, M. S., 1558
 Moon, N. L., 1119
 Mooney, J. M., 1119
 Mooney, John, 1226
 Moore, A. C., 1315
 Moore, Edward S., 1173*
 Moore, L. F., 504
 Moore, H. C., 408
 Moors, H. M., 1417, 1557, 1662
 Moran, W. F., 1174
 Morawetz, Victor, 1118, 1173
 Morcom, W. Q., 503
 Morgan, J. R., 597
 Morris, D. R., 888
 Morrison, E. E. F., 1022
 Morrison, F. A., 107*
 Morse, D. H., 1273
 Morse, J. J., 1667
 Morton, J. D., 598, 1118, 1371
 Moss, T. B., 1558
 Moulton, H. S., 597
 Mount, E. O., 45
 Muhlfeld, J. E., 1418
 Mulhern, J. W., 503, 739, 740*
 Munro, J. H., 599
 Munson, J. B., 552, 646
 Murphy, C., 45, 408, 503
 Murphy, M. A., 552
 Murphy, W. J., 45
 Murray, C. R., 838
 Murray, Oscar G., 45
 Muse, W. A., 1320
 Musselwhite, C. A., 1273
 Muxen, M. B., 1417
 Myers, F. T., 208
 Myers, M. M., 1321
 Nash, C. W., 504, 686
 Neff, H. J., 1273
 Nell, E. A., 207
 Nelson, J. R., 503, 739*
 Nelson, W. A., 1273, 1320
 Nevins, W. S., 739
 Newberry, E. H., 1460
 Newkirk, J. W., 1225
 Newman, W. H., 1662
 Newton, A. W., 1320, 1499
 Nicholls, F., 598
 Nicholson, M., 1272
 Niederlander, D. R., 1022
 Noah, J. T., 207
 Noeller, G. J., 646
 Nonnemacher, A. W., 739
 Norton, A. T., 1557
 Norton, C. T., 1498
 Norton, Henry E., 1663
 Nuckols, C. C., 201
 O'Brien, J. H., 1174
 O'Brien, J. W., 646
 O'Connor, G. D., 739
 O'Donnell, J. H., 1320
 O'Donnell, Joseph P., 1607
 O'Dowd, E. T., 787
 Ogilvie, C. H., 1459, 1557
 Oglesby, R. T., 927
 O'Hara, A., 886
 Oliver, W. H., 552
 Olmstead, Geo. H., 1320
 Olson, Edward, 455, 599, 692
 O'Neal, C. T., 1371, 1417*
 Orcutt, C. S., 837
 Orr, James P., 504
 Ortmann, R., 453
 Osborn, C. H., 1025, 1073
 Osborn, James, 45
 Osborn, W. H., 1119
 Osborne, L. A., 1566
 Overbay, W. P., 1372
 Owen, W. F., 979
 Owen, A. R., 780
 Pace, W. J., 979
 Page, Wm. Byrd, 504
 Page, W. N., 1225
 Paine, A. W., 884
 Paine, W. G., 1320
 Paist, R. N., 1024
 Parker, E. D., 1074
 Palmer, L. H., 553
Painer, R. H., 739
 Pangie, E. M., 45
 Pargen, T. J., 787
 Pargeter, W. R., 1173
 Parker, C. A., 1273
 Parker, E. D., 1119
 Parker, F. A., 692
 Parker, J. W., 887
 Parks, Nathaniel, 1174
 Parnin, E. P., 1226
 Parrott, S. F., 503, 646
 Parrott, T. H., 552
 Paton, S. B., 887
 Patriarche, A., 1606, 1607
 Patterson, David, 799, 1074
 Patterson, J. D., 1025
 Patterson, N. F., 1024
 Patton, Charles, 1320
 Patton, F. M., 786
 Paynter, W. C. S., 786
 Payton, Charles J., 692
 Pearce, F. C., 553
 Pearsall, N. G., 1320
 Pease, H. L., 1273
 Peasley, B. J., 888
 Pechin, F. R., 1499, 1663
 Peck, P. H., 838
 Peck, R. L., 1372
 Peeples, Howell, 1499
 Pegram, R. B., 504
 Pendell, F. D., 552
Pennington, W. M., 599
 Perdue, W. F., 456
 Perlowitz, Julius, 19-5
 Perry, A. D., 838
 Peter, J. S., 1225, 1371*
 Petersen, J. C., 1074
 Pettingill, H. P., 1173
 Peyton, C. J., 1074
 Petriken, B. R., 207
 Pettibone, F. G., 1173
 Pheney, P. A., 1499
 Phetteplace, L. H., 1320
 Pickard, F. C., 553
 Pierce, H. J., 1022
 Pierson, A. D., 1119, 1174
 Pitchford, C. P., 739
 Platt, H. V., 1119
 Platt, J. D., 1421
 Polk, L. J., 1173
 Pope, F. W., 1557
 Porter, R. L., 207
 Potts, F. E., 887
 Poveleite, H. A., 1074
 Powell, A. H., 1120
 Powell, T. C., 45
 Powell, T. F., 1273, 1320
 Powell, V. U., 1120
 Power, N. J., 979
 Powers, M. J., 1663
 Pratt, G. C., 1316
 Pratt, T. A., 1273
 Preston, A. L., 1074
 Pries, Samuel T., 1417
 Priest, Frank, 455
 Provence, W. T., 94
 Pruyin, R. C., 201
 Pultz, J. L., 785
 Pratt, C. H., 979
 Pratt, W. D., 1073
 Purdy, J. S., 979
 Purdy, W. F., 408
 Purvis, Allan, 1498, 1663
 Pusch, J. H., 886
 Quick, J. E., 786
 Quigley, W. H., 838
 Quigley, G. N., 837
 Quigley, J. P., 692, 837
Radley, H. P., 1119, 1173, 1225, 1320
 Ramseur, A., 1662
 Ramsey, John P., 1662
 Randolph, Epes, 979
 Randow, W. A., 1663
 Rankin, J., 786
 Rankin, John H., 1321
 Rapelje, John M., 646
 Rasch, Carl, 646
 Rasor, C. M., 553
 Rawlin, J. S., 408
 Rawn, A. G., 94
 Ray, G. J., 1663
 Rayburn, E. R., 1218
 Raymond, F. D., 785
 Reagan, F. H., 1372
 Reinauer, I. E., 1273
 Reddick, J. S., 1272
 Reddy, John, 1025
 Redfield, C. S., 406
 Redman, C. E., 1320
 Reeves, F. H., 1320
 Reeves, J. P., 1272
 Regan, Fred, 1607
 Reid, George T., 1026
 Reid, H. D., 739
 Reid, J. J., 1321
 Reid, Sir Robt. G., 207, 739
 Reid, W. D., 739
Reid, W. L., 1316*
 Reiner, A. F., 552, 739
 Reister, J. C., 1174
 Reiph, E. J., 888
 Rembert, E. B., 979
Reynolds, C. C., 1074, 1321
Reynolds, E. T., 1320, 1411
Reynolds, M. H., 1663
 Rhea, Frank, 977
 Rhoton, Lewis, 1606
 Rice, Front, 886
 Rich, Henry A., 45
 Richards, E. J., 1174
 Richards, J. U., 782, 1565
 Ricker, George A., 208
 Ridell, J. C., 207
 Rider, W. A., 977
 Riley, G. U., 107*
 Ripley, E. P., 93
 Ristine, G. W., 454
 Robbins, A. E., 1219
 Robbins, M. L., 94
 Robbins, W. B., 504
 Roberts, C. F., 1320
 Roberts, D. I., 692
 Robertson, D. D., 1321
 Robinson, D. H., 785, 1607
 Robinson, D. J., 1321
 Robinson, J. T., 1460
 Robinson, L. R., 837
 Rock, W. O., 739, 837
 Rodgers, B. F., 1607
 Rodgers, Charles B., 1459, 1607
 Rodgers, W. F., 1174
 Roe, Ralph L., 1607
 Roever, A. E., 1565
 Rogers, F. G., 1119
 Rogers, H. H., 1225
 Rogers, S. L., 552
 Rogers, W. F., 1074, 1273
 Roome, A. E., 408, 1024
 Rose, W. A., 455
 Rose, W. E., 455, 1418
 Rosen, Walter R., 1073
 Rosevear, J. M., 979
 Ross, D. W., 500, 503
 Ross, E. H., 786
 Rothas, F. W., 1498
 Roundtree, C. E., 1073, 1273
 Rousseau, T. A., 504
 Roxborough, T. W., 207
 Roe, R. L., 1557
 Royal, R. R., 1074
 Royce, Daniel, 1499
 Runyon, F. C., 1316
 Ruple, George A., 786
 Rusch, L. E., 1505
 Russ, J. F., 785
 Russell, J., 1606
 Russell, W. B., 787
 Rutland, W. H., 1119
 Royer, M. D., 692
 Ruple, Geo. R., 552
 Russell, J. K., 1607
 Ryan, J. W., 1118, 1174, 1272, 1498
 Ryan, T. R., 553
 Ryman, Frank, 1315
 Sackett, L. H., 786
 Safford, H. T., 692
 Salter, T. F., 201
 Salter, Fred G., 207
 Sams, A. J., 886
 Sanderson, W. W., 1667
 Sanford, E. J., 1118
 Sasser, J. W., 1460
 Saunders, C. H., 599
 Saunders, Eugene, 739, 786
 Saunders, George H., 1459
 Saxton, W. M., 838
 Scanland, G. R., 734
 Schatz, F. J.,
Schatz, W. J., 1565
 Scheer, George, 1226
 Scheftels, Edwin, 1505
 Schleyer, G. H., 886
 Schmidt, W. F., 837
 Schnable, A., 1174
 Schneider, G. C., 1460
 Schneider, F. W. L., 1558
 Schneider, J. F., 1321
 Schrader, John, 1025
 Schreck, Calvin, 1607
 Schumacher, J., 888
 Schwab, C. M., 1367

ELECTIONS AND APPOINTMENTS.—Continued.

[Portraits are indicated thus.]*

Harrison, S. N., 563
 Hart, W. H., 92
 Hartley, B. H., 739
 Haskins, T. R., 979
 Hattery, Charles, 1026
 Haussling, F. M., 1169
 Havron, John, 977
 Hawley, C. S., 201
 Hawley, H. W., 739, 837
 Hayden, C. S., 1371, 1459
 Hayden, J. D., 552
 Haynen, 734
 Hayes, M. M., 740
 Hayes, W. C., 455, 787
 Haymen, W. J., 740
 Haymond, F. O., 1320
 Haynen, N. J., 46
 Haynen, W. J., 553, 646
 Head, D. W., 1174
 Head, T. D., 1272
 Hearon, R. L., 1272
 Hebard, G. W., 156*
 Hedge, G. W., 94
 Helbig, O. H., 207
 Helmer, C. E., 1499
 Helps, H. J., 599
 Hemphill, F. J., 1026, 1273
 Hendricks, J. B., 598
 Henley, W. J., 93, 454
 Henry, S. J., 979
 Herr, E. M., 1366
 Herring, Geo. E., 504
 Herring, W. D., 1371, 1417
 Herrington, Clayton, 1371, 1417
 Hershey, H. E., 979
 Hewitt, A., 1460
 Heyman, William, 786
 Heyser, E. S., 692
 Hickey, J. E., 1460
 Hill, A. B., 45
 Hilliker, C. E., 1025
 Hillis, W. S., 1607
 Hilton, A. C., 45
 Hinchman, W. B., 504
 Hinchman, W. P., 207
 Hinchy, M., 455
 Hines, C. L., 785
 Hines, Walker D., 1173
 Hitchcock, F. S., 884
 Hobbs, H. L., 1558
 Hobkirk, A. N., 1119, 1120
 Hodges, Lieutenant-Colonel, 93
 Hodgkins, E. W., 1022
 Hodgins, S. W., 504, 599, 692
 Hogle, C. R., 786
 Hogue, R. V., 1025
 Holbrook, F. S., 979
 Holbrook, Percy, 1316
 Holden, H. G., 1073
 Holland, Hans, 408
 Hollingshead, A. G., 107*
 Hollowell, R. R. D., 1174, 1225
 Holstein, Otto, 1417
 Holt, Elmer, 646
 Hood, P. W., 1461
 Hood, R. J., 456
 Hooper, Chas. E., 1225
 Hopkins, L. C., 201
 Hopkins, W. A., 838
 Hopper, Frank, 1663
 Horn, H. G., 1219
 Horn, Henry J., 1417
 Horning, L. L., 1225
 Horrigan, J. F., 1119
 Horrigan, W. J., 1119, 1272
 Horsey, A. W., 1607
 Hoskin, W. J., 1025
 Hough, P. H., 94
 Houlahan, P. H., 455*
 Houston, Joseph H., 1558
 Houston, J. S., 1459, 1499, 1607
 Houston, W. O., 887
 Hovey, M. H., 838
 Howard, Frank, 979, 1074
 Howard, John H., 1119
 Howard, W. G., 504
 Howe, Carl, 739
 Howell, W. S., 1273
 Huddell, A. O. R., 785
 Hudson, W. E., 504
 Hudson, W. L., 1607
 Hughes, H. P., 1174
 Hughes, M. C., 1073
 Hulen, John A., 1558
 Hull, D. D., Jr., 598
 Hunt, C. H., 837
 Hunt, E. M., 1498
 Hunt, Union B., 1606
 Huntington, H. E., 45
 Hurley, J. E., 1225
 Huskey, H. B., 1267
 Hutchinson, J. B., 1558
 Hyndman, F. T., 691, 977
 Ingersoll, A. M., 1118, 1173, 1320
 Ingersoll, C. M., 1607
 Ingling, W. J., 785
 Ingram, R. H., 1119, 1225
 Irving, Elmer, 1558
 Irwin, F. K., 740
 Isaacs, A. J., 504
 Ives, D. O., 504
 Jackson, C. H., 979
 Jackson, J. A., 552
 Jackson, C. P., 552
 Jackson, W. S., 1372
 Jacobs, E. S., 739, 837
 Jacobsen, N. H., 1320
 Jacoby, H. E., 201
 James, E. F., 92
 James, J. H., 1372
 James, J. M., 1273
 Jameson, E. L., 1074
 Jamieson, R. R., 552
 Jarvis, Aemilius, 598
 Jarvis, G. M., 207
 Jay, Phillip, 1557
 Jeniferis, William, 1320
 Jeffries, I., 599
 Jenifer, F. M., 1558
 Jenkins, H. M., 1372
 Johnson, A., 1367
 Johnson, Ben., 456
 Johnson, Chas. E., 1226
 Johnson, F. L., 94
 Johnston, P. W., 1076
 Jones, A. B., 456
 Jones, B. H., 1367
 Jones, E. F., 838
 Jones, F. M., 785
 Jones, H. S., 1459
 Jones, John G., 1273
 Jones, Selden, 44
 Jones, W. H., 1320
 Jones, W. F., 1119
 Jordan, H. A., 786, 887
 Jordan, S. A., 456, 599
 Joyce, H. L., 207
 Junod, E. H., 886
 Kalman, C. O., 503
 Kapp, H. W., 1417
 Kapp, P. C., 1460
 Keane, W. J., 598
 Keating, W. J., 1499
 Keefer, T. H., 787
 Keehan, M. E., 1118
 Kegler, I. B., 977
 Kelley, Robt. F., 207, 408
 Keller, W. A., 504
 Kellogg, E. M., 783, 1667
 Kellogg, F. D., 1118
 Kellogg, F. W., 783, 1667
 Kemp, J. B., 1417
 Kenealy, J. L., 552
 Kenly, R. G., 94, 207, 456
 Kennedy, J. A., 1119
 Kennedy, Thos. B., 1371
 Kennett, P. G., 1218
 Kent, J. B., 532
 Kentfield, L. H., 979, 1025
 Kernan, James, 1367
 Kerr, Hugh M., 503
 Kerr, John, 207
 Kerr, Lorain A., 552
 Kerr, W. F., 977
 Keith, W. W., 1558
 Kiddle, A. W., 1219
 Kight, Torrence, 887
 Kildoyle, S. E., 504, 1174
 Kiley, Frank, 1073
 Kilpatrick, A. H., 739
 Kilpatrick, R. F., 1226
 Kilpatrick, W. B., 830
 Kinch, W. M., 201
 King, C. W., 1320
 King, J. H., 782
 King, R., 786
 Kinkhead, J. A., 1069
 Kinney, C. W., 1119, 1272*
 Kinsworthy, E. B., 1606
 Kipp, Alfred R., 1273
 Kirby, W. S., 1606
 Kirkland, J. W., 1025
 Kirkpatrick, Roy, 1320
 Kirficks, William, 1174
 Kirtland, F. W., 739, 837
 Kittredge, A. M., 1421*
 Kizer, T. J., 599
 Knight, Harold, 46, 208
 Knoche, G. C., 739
 Knott, W. D., 1460
 Knowles, H., 1118, 1174
 Koch, J. J., 504
 Koerner, T. H., 786
 Kohler, E. S., 1417
 Kolb, E. W., 888, 979
 Kramer, Le Roy, 886
 Krauser, F. C., 1024
 Kruse, H. G., 1119, 1459
 Kuhn, B. F., 1372
 Kydd, G., 785
 Lakin, F. D., 1372
 Lallande, J., 1119, 1273
 Landers, C. C., 1226
 Landgraf, John, Jr., 1073
 Landon, E. P., 1459
 Landry, H. D., 1459
 Lane, J., 1173
 Langley, W. E., 1459
 Lankford, R. D., 552
 Larrabee, J. H., 1459
 Lassiter, F. M., 1499
 Latrobe, Gamble, 1417
 Latta, H. P., 1460
 Laughlin, F. D., 691
 Lawlor, J., 455
 Lawrence, J. S., 1606
 Lawrence, R. E., 1025, 1119
 Lawrence, T. L., 455
 Lawrence, W. J., 787
 Lawson, T. A., 503
 Lawton, H., 553
 Lawton, H. C., 1557
 Leake, Stewart C., 455
 Leake, T. S., 1174
 Le Baron, A. T., 201, 1505
 Lee, J. M., 1273
 Lee, N. J., 553
 Leech, R. M., 646
 Leeming, L. B., 787
 Lellane, L. E., 1320
 Lent, B. H., 1558
 Leonard, C. T., 1320
 Leppla, John, 45, 408
 Leslie, John, 1557
 Lewis, Charles T., 1073, 1118
 Lewis, F. L., 646, 785
 Libbe, C. H., 1024
 Libby, J. E., 208
 Lightfoot, T. E., 1558
 Lind, H. E., 787, 838
 Lindsay, C. E., 1120, 1224
 Linn, Samuel, 1025
 Linton, J. A., 552
 Lipman, M., 1558
 Lippincott, J. D., 504, 786
 Lissman, O. C., 785
 Liston, J. F., 1174
 Logue, H. A., 1372
 Lomas, H. F., 887
 London, W. J. A., 92
 Lonnbladh, L. F., 504
 Loomis, L. D., 739
 Lorton, J. G., 455
 Lothrop, J. H., 1320
 Loughren, A. J., 740
 Lowe, J. G., 1025, 1073
 Lowell, J. W., 59*
 Lowry, H. K., 1558, 1663
 Lusk, John A., 598
 Lutz, S. G., 1663
 Lyman, L. B., 1607
 Lynch, W. R., 207
 Lytle, A. J., 838
 McAlaster, B. A., 1074, 1120
 McCarthy, J. E., 1119
 McCarthy, J. J., 1558
 McCarty, John, 1024
 McCarty, Jr., R. J., 1557
 McCaskey, Geo. W., 552
 McCleskey, L. L., 1499
 McClure, John F., 1606
 McClure, L. E., 837
 McChord, C. C., 1173
 McCormack, E., 1069
 McCormick, F. E., 887, 1273
 McCormick, W. H., 94
 McCrea, E. F., 692
 McCrea, J. H., 887
 McDaniel, J. U. C., 1505
 McDill, E. L., 1558
 McDonald, C. F., 1174, 1320
 McDonald, F. J., 786, 887
 McDougall, J. A., 552
 McFarland, E. A., 979
 McFarland, W. M., 1566
 McGie, John, 552
 McGraw, J. R., 1418
 McGreery, J. M., 1174
 McGuire, L. B., 785
 McHarg, H. K., 552
 McKay, John G., 1557
 McKay, R. J., 646
 McKeen, B., 552
 McKeen, W. R., Jr., 551, 553, 599
 McKelvy, F. B., 786
 McKenna, E. A., 739
 McKenna, Frank J., 1320
 McKenna, R. F., 246*
 McKenty, H. C., 1273
 McKillop, A. J., 1120
 McKinnon, G. S., 94
 McLaughlin, F. C., 1120
 McLean, S. J., 1073
 McLeay, J. A., 552
 McLeish, S. D., 739
 McManus, P. L., 1498
 McMaster, H. W., 837
 McMillan, C. R., 1558
 McMullen, G. K., 1267
 McMynn, J. C., 407
 McNamara, J. D., 786, 887
 McNaughton, James, 1268*
 McNeille, J. K., 503
 McNulty, F. M., 94
 McWhirter, W. L., 1174
 Macbeth, H. A., 1119
 Mace, J. F., 552
 Macgregor, F. W., 1498
 MacGregor, J. A., 1606
 Mackrell, Theodore, 455
 MacLennan, J. A., 1505
 McVicker, W. B., 1565
 Madill, Robt., P., 46
 Maguire, John F., 1372*
 Maharg, C. S., 1606
 Maher, John C., 1074
 Mahoney, J. P., 201
 Mahoney, John, 886
 Malcolm, W. H., 503
 Mallard, J. S., 786
 Mallory, J. H., 1607

Wilson, E., 838
 Wilson, Edmund, 1459
 Wilson, F. P., 456
 Wilson, G. C., 739
 Wilson, W. F., 739
 Wilt, Thomas R., 1607
 Wilton, R. G., 455
 Winburn, F. E., 207
 Windsor, J. E., 1320
 Winter, O. O., 837
 Winterfeldt, Hans, 1073
 Winters, George W., 887
 Wintringham, H. T., 207
 Witman, J. K., 1321
 Wolcott, Harry K., 503

Wolfel, P. L., 453
 Wolhaupter, B. Y., 1316
 Wood, C. H., 1505
 Wood, E. E., 94
 Wood, E. R., 598
 Woodruff, R. E., 1417
 Woodside, S. P., 408
 Word, F. L., 1558
 Worrall, J. G., 1119
 Worthington, B. A., 207
 Wray, T. A., 552
 Wright, George R., 786
 Wright, G. S., 1417
 Wright, W. J., 503
 Wuelpel, T. W., 1073

Wylie, W. H., 1073
 Wylie, Jr., B. F., 837
 Wynn, F. S., 552
 Yant, H. O., 1073
 Yealland, F. R., 1320
 Young, E. E., 1417
 Young, H. C., 1174, 1273
 Young, M. H., 94
 Yundt, J. L., 838
 Zartman, S. B., 1662
 Zehner, John A., 207, 408
 Zirckel, W. E., 1558

OBITUARY.

[Portraits are indicated thus*.]

Baldwin, F. W., 1558
 Bardsley, Adams, 838
 Barnes, O. W., 1418
 Beatty, Frank G., 1663
 Beckler, Elbridge H., 838
 Bergs, William T., 932
 Boatman, Frank P., 1321
 Brown, Garry, 1663
 Bryan, Joseph, 1461
 Burkhalter, D., 1558
 Burt, A. J., 208
 Butcher, George W., 1558
 Butcher, Geo. W., 1607
 Castle, A. M., 44
 Connelly, Thomas D., 1663
 Cornish, W. D., 1372
 Daniels, George H., 444*
 Darlow, Alfred, 1226
 Dilworth, F. A., 884
 Dockstader, D. S., 599
 Du Barry, E. L., 1663
 Ferris, James M., 1026
 Forney, M. N., 987
 Frazer, Chester A., 1372

Garfield, F. H., 932
 Gargan, Thomas J., 692
 Gray, Col. S. F., 787
 Gray, Dr. Thomas, 1663
 Greenway, Thomas, 1372
 Griffiths, H. H., 787
 Guthrie, Ossian, 1273
 Hackedorn, William E., 1499
 Hackney, George, 456
 Hankins, Major William A., 1274
 Hartshorne, Charles, 1372
 Hayden, Edward D., 1418
 Hayes, Richard, 1273
 Hengerer, A. D., 599
 Higbee, Charles E., 787
 Huesmann, F. L., 932
 Hughes, Robert D., 1074
 Hummel, Frank H., 932
 Ingram, J. D., 691
 Irwin, P. H., 1026*
 Jarrett, Thomas E., 1321, 1373
 Jarvis, G. M., 208

Kelly, J. K., 1367
 Leake, W. J., 1663
 Llewellyn, E. H., 782
 Lowry, C. B., 1421, 1504
 Lunkenheimer, C. F., 691
 Larrabee, J. H., 1372
 Leeds, William B., 409
 Lord, Charles K., 979
 MacKinnon, George S., 456
 McLeod, Albert, 646
 Mansfield, M. W., 1074
 Maxwell, D. E., 1026
 Meany, John F., 1373
 Menocal, Garcia Aniceto, 599
 Meyer, C. J. L., 599
 Millican, Samuel, 1274
 Minto, H. M., 832
 Modisette, W. C., 932
 Moore, S. E., 782
 Murdock, Willard D., 1026
 Mute, J. W., 1169
 Peabody, W. R., 456

Quigley, R. S., 838
 Raymond, A. A., 1316
 Raymond, Frederick Dwight, 646
 Reeves, Frank H., 787
 Reid, Sir Robert G., 379*
 Ripley, Joseph T., 553
 Sage, I. Y., 1418
 Sanford, E. J., 740
 Sargent, Frank P., 932
 Schimeler, F. J., 1321
 Skinner, E. V., 1418
 Smith, Charles Arthur, 1273
 Smith, T. L., 1120
 Soule, Richard H., 1608
 Spalding, Elmer H., 1607
 Stubbs, David D., 979
 Terry, C. E., 92
 Townsend, Henry C., 553
 Weeks, Isaiah S. P., 1175*
 Whittlesey, George Beale, 1026
 Williams, Lewis, 932
 Woodson, J. A., 1273

RAILROAD CONSTRUCTION.

Aberdeen & Huron (Electric), 505
 Aberdeen & Tombigbee Valley, 599
 Abilene & Southern, 1373
 Adirondack & St. Lawrence, 1559
 Akron, Canton & Youngstown, 838
 Alabama, Mississippi, 1373
 Alabama, Tennessee & Northern, 932
 Alberta Central, 1226, 1274, 1608
 Alberta Southern, 1026
 Alberta Northwestern, 1026
 Alberta Railway & Irrigation Co., 505
 Alberta Roads, 409
 Albia Interurban, 838
 Albuquerque & Eastern, 888
 Alexandria, Leesville & Lufkin, 456, 553
 Algoma Central & Hudson's Bay, 599, 1559
 Altus, Roswell & El Paso, 47, 553, 838
 Angelina & Neches River, 47
 Appalachian Railway, 932
 Arizona Roads, 647
 Arkansas Central, 980
 Arkansas, Louisiana & Gulf, 553, 888
 Arkansas Roads, 932, 1026
 Artesian Belt, 1373, 1559
 Asheville & Carolina (Elec.), 553
 Asheville & Greenville (Electric), 456
 Astoria, Seaside & Tillamook, 505
 Atchison, Topeka & Santa Fe, 787, 1074,
 1373, 1664
 Atlanta & Carolina, 95
 Atlanta, Birmingham & Atlantic, 409, 553,
 740, 888, 1175, 1500
 Atlanta, Griffin & Mason (Elec.), 409
 Atlanta Northeastern, 553
 Atlanta Northeastern (Electric), 838
 Atlanta Northeastern, 1175
 Atlantic & St. Andrews Bay, 599, 692, 1373
 Atlantic Coast Line, 647
 Atlantic, Northern & Southern, 1175
 Atlantic, Quebec & Western, 1608
 Augusta & Edgefield, 787, 888
 Augusta Southern, 1608
 Bakersfield & Ventura, 740, 932
 Ballinger & Abilene, 456, 1321
 Baltimore & Ohio, 599, 1418, 1559, 1608
 Baltimore & Washington (Electric), 208, 600
 Bayfield Transfer, 1460
 Bay Point & Clayton, 1559
 Beaumont & Great Northern, 208, 692
 Beaumont & Saratoga Transportation, 1608
 Beaver Valley & Northwestern, 599, 980,
 1373, 1608
 Bessemer & Lake Erie, 600, 1274
 Billings & Cook City Electric, 838
 Billings & Northern, 1559
 Bingham & Garfield, 554
 Birmingham & Gulf Railway & Navigation
 Co., 647
 Birmingham & Shad Mountain, 1321
 Birmingham, Columbus & St. Andrews, 1664
 Bloomington, Pontiac & Joliet (Electric), 456

Blytheville, Leachville, Arkansas Southwest-
 ern, 95
 Bonlee & Western, 1226, 1321
 British Columbia (Electric), 208, 600, 787
 Brookings & Sioux Falls (Electric), 208
 Buchanan & Northern, 505
 Buena Vista & Mauk, 1075
 Buenavista & Northwestern, 1321
 Buffalo & Lake Erie Traction, 1321
 Buffalo Creek & Gauley, 1500
 Buffalo, Lockport & Rochester (Electric),
 980
 Buffalo, Rochester & Pittsburgh, 409, 1226
 Buffalo Southern (Electric), 1075
 Burk's Falls & French River, 600
 Burlington County Railroad, 554
 Burlington Interurban, 692
 Burr's Ferry, Brownell & Chester, 740, 838,
 1559
 Cairo & St. Louis, 1120
 Calgary & Kneenil, 1026
 California Company, 1045
 California, Nevada, Idaho & Northern, 1559
 California Northeastern, 1460, 1608
 Canadian, Liverpool & Western, 1460
 Canadian Northern, 95, 409, 456, 554, 600,
 692, 932, 980, 1026, 1120, 1175, 1373,
 1559, 1608
 Canadian Northern Ontario, 1120, 1226
 Canadian Northern Quebec, 1120, 1226, 1608
 Canadian Pacific, 95, 409, 505, 554, 600, 692,
 740, 888, 932, 980, 1027, 1120, 1274,
 1373, 1460, 1559
 Canadian River Railroad, 980
 Canadian Roads, 554, 787, 1608, 1664
 Canadian Western, 1274
 Cananea, Yaqui River & Pacific, 1175, 1608,
 1664
 Carolina, Clinchfield & Ohio, 692, 787, 1075,
 1175, 1664
 Cazenovia & Sauk City, 505, 647, 1373
 Central Arkansas (Electric), 1373
 Central California, 1608
 Central of Georgia, 1027, 1075
 Central Kentucky Traction, 554
 Central Railway, 647
 Central Railroad of Louisiana, 1559
 Central Texas Traction, 787
 Central Wisconsin Transit, 692
 Champlain & Sanford, 838
 Charleston & Casey, 47
 Charlotte Harbor & Northern, 456
 Chesapeake & Ohio, 95, 554, 1027, 1373
 Chestnut Ridge, 1559
 Chicago & Alton, 1175
 Chicago & Milwaukee (Electric), 787, 1175,
 1321
 Chicago & North-Western, 47, 456, 1120
 Chicago & Wabash Valley, 740
 Chicago, Burlington & Quincy, 600
 Chicago, Joliet & Western Interurban, 1460

Chicago, Milwaukee & St. Paul, 600, 647,
 692, 740, 838, 888, 980, 1121, 1176,
 1373, 1559
 Chicago, Ottawa & Peoria (Electric), 1075,
 1176
 Chicago, Ottumwa & Western, 600
 Chicago, Rock Island & Gulf, 1373, 1500
 Chicago, Rock Island & Pacific, 647, 838,
 1321
 Chicago, Wheaton & Western (Electric), 932
 Cincinnati & Birmingham Air Line, 208
 Cincinnati, Kentucky & Virginia, 208, 600,
 787
 Cleveland Short Line, 1559
 Clinton & Colorado Springs, 1373
 Clinton, Oklahoma & Western, 1418, 1500
 Coal River Railway, 554
 Colgate, Sulphur & Western, 692
 Colorado & Hereford Gulf, 95, 1460
 Colorado & Nevada, 456
 Colorado & Northern, 1559
 Colorado & Southern, 456, 600, 1075, 1226,
 1321
 Colorado & Wyoming, 1559
 Colorado, Columbus & Mexican, 47, 600,
 1559
 Colorado Interurban, 1321
 Colorado Railway, 888, 980
 Colorado Southern, New Orleans & Pacific,
 787, 888
 Colorado, Texas & Mexico, 600, 1460
 Colorado Transportation Co., 47
 Columbus & Southern, 1460
 Coos Bay Railway & Terminal Co., 788
 Copper River Railway, 47, 554, 1027, 1373
 Corbin Coal & Coke, 1373
 Cotton Belt Railroad, 95
 Corsicana-Palestine Interurban, 1321
 Coweta, Franklin & Troup, 932
 Crows Nest & Northern, 1500
 Cumberland Railroad, 505
 Cuyuna Range, 1274
 Dakota & Western, 1121, 1227
 Dakota, Kansas & Gulf, 1500
 Dakota Southern, 1274
 Dallas, Cleburne & Southwestern (Missouri,
 Kansas & Texas), 1373
 Dallas & New Mexico, 980, 1075
 Dayton, Lebanon & Cincinnati (Electric),
 1321
 DeKalb Midland (Electric), 1608
 Delaware & Eastern, 95, 1075, 1121
 Delaware & Hudson, 1608
 Delaware, Lackawanna & Western, 554
 Delaware Tunnel Railroad Co., 1460, 1500
 Denver & Interurban, 456
 Denver & South Platte, 600
 Denver, Laramie & Northwestern, 456, 600,
 693, 1121, 1176, 1559
 Denver, Northwestern & Pacific, 554, 1121,
 1176

ELECTIONS AND APPOINTMENTS.—Continued.

[Portraits are indicated thus*.]

Schwancke, Major J. A., 1371
 Schwartzburg, H., 1667
 Scott, D'Arcy, 1073
 Scott, Guy, 504, 599
 Scott, G. H., 455
 Scott, J. G., 598
 Searies, Dennis, 1073
 Serrine, E. E., 94
 Sesser, J. C., 927
 Settlemire, D. P., 201
 Severns, W. V., 786
 Sexton, T. P., 886
 Seymour, F. M., 739
 Seymour, P. M., 207
 Shackell, Charles, 1372
 Shand, A. C., 408
 Sharpe, F. W., 646, 785
 Shaver, A. G., 208*
 Shaw, E. H., 552
 Shaw, William, 1225
 Shea, C. J., 1119
 Shea, Joseph, 1558
 Sheldon, Parley, 408
 Shepard, C. E., 1024
 Sheridan, H. W., 1606, 1663
 Shewen, J. G., 785
 Shick, F. A., 1367
 Shick, John L., 553
 Shirk, W. B., 455, 504
 Shockley, J. L., 1557
 Shoffner, E. J., 1607
 Shortt, A. T., 1120
 Shultz, S. H., 1663
 Siddall, B. M., 785
 Sidley, W. P., 1316
 Slemmon, T. W., 1566
 Slink, E. E., 1367
 Simmonds, P. R., 977
 Simpson, Andrew, 207
 Simpson, George, 1119
 Simpson, W. B., 44
 Sinclair, Angus, 202
 Sinnickson, C. R., 1558
 Sinnott, Thomas, 646, 1499
 Sisson, A. H., 1316
 Skillen, J. H., 1273
 Skinner, E. V., 1557
 Slater, G. E., 549
 Slaysman, A., 1268
 Slowley, J. F., 1174, 1225
 Smallhorn, R. P., 455
 Smith, A. M., 45, 408
 Smith, C. A., 1321
 Smith, Carl Frederic, 1321, 1499
 Smith, C. G., 1371, 1417
 Smith, C. M., 1120
 Smith, C. W., 599
 Smith, Elmer, 1073, 1273
 Smith, E. H., 597, 739
 Smith, E. L., 453
 Smith, Frank, 979
 Smith, F. C., 646
 Smith, F. W., 599
 Smith, H. P., 1025
 Smith, Jackson, 93
 Smith, Lamar, 1371
 Smith, M. R., 207
 Smith, R. E., 1372
 Smith, R. B., 504
 Smith, Sherman, 692
 Smith, S. B., 1558
 Smith, W. B., 1557
 Smith, W. C., 979
 Smythe, C. C., 1025
 Snow, G. F., 1119
 Snow, W. B., 1420
 Snyder, Frank, 201
 Snyder, H. J., 598
 Snyder, H. S., 1367
 Soffel, P. K., 408
 Sommer, Frank H., 1459
 Souders, L. M., 207, 408
 Soule, J. L., 207
 Southern, A., 1557
 Spare, C. R., 44
 Spear, G. W., 1565
 Spearman, W. J., 1460
 Spencer, C. H., 408
 Spencer, E. G., 1073
 Spotts, C. H., 550, 1367
 Squire, W. C., 977, 1667
 St. John, E., 1566
 Staley, H. F., 1558, 1607
 Staley, P. C., 1460
 Stebbins, S. H., 94
 Steele, Charles, 45
 Steele, J. N., 1225, 1273
 Steinboemer, H. J., 1120
 Steltenkamp, J. A., 1119
 Stembel, C. P., 504
 Sternberg, A. S., 1074
 Stevens, A. H., 1025
 Stevenson, H. C., 1459
 Stewart, Guy L., 1372
 Stewart, John, 201
 Stewart, J. B., 979
 Stich, Charles, 94
 Stickney, A. B., 1662
 Stickney, S. C., 504
 Stigler, H. W., 1372
 Stiles, V. R., 1459
 Stillman, E. A., 1565
 Stillwell, W. H., 1606
 Stimson, O. M., 46, 208
 Stinson, C. H., 786, 887
 Stone, C. E., 1417
 Stone, H. E., 1613
 Stone, J. W., 1418
 Stone, June, 1557
 Storey, S. W., 1557
 Storrs, W. R., 598
 Story, Jonathan, 1417
 Stough, C. E., 1074
 Strawser, E. L., 599
 Streator, William, 207
 Strickland, S. G., 1499
 Stutter, John, 504
 Suckling, H. E., 207, 503
 Sullivan, B. A., 739
 Sullivan, J. G., 1025, 1226*
 Sullivan, John L., 1073
 Summers, F. E., 1459
 Swearer, H., 1267
 Swearer, W. F., 1367
 Sweet, Samuel B., 94
 Sweetman, E. M., 1174, 1273
 Sweeney, G. I., 1558
 Swift, J. R., 549
 Sykes, S. C., 1024
 Symonds, F. A., 1372
 Tait, H. M., 455
 Tatom, E., 599
 Tawseley, A. W., 552
 Taylor, E., 598
 Taylor, Frank, 1120
 Taylor, Frank W., 1120
 Taylor, G. W., 838
 Taylor, W. S., 207
 Ten Broeck, Chas. W., 646
 Tenbroeck, R., 1073
 Tenny, C. E., 455
 Terhune, W. B., 552
 Terrell, J. F., 1273
 Terry, C. A., 1566
 Tessiers, C. W., 1174, 1321
 Thayer, H. B., 1316
 Theed, E. A., 1119
 Thiehoff, W. F., 739, 1606, 1663
 Thomas, Benjamin, 93
 Thomas, F. W., 1226
 Thomas, G. N., 1119
 Thomas, H. L., 1558
 Thompson, C. A., 977
 Thompson, F. M., 1499
 Thompson, H. L., 1273
 Thompson, Melvin, 887
 Thompson, R. L., 979, 1025
 Thompson, W. K., 503
 Thompson, R. G., 646
 Thorn, W. H., 1499
 Throop, W. S., 1225
 Tilton, G. F., 1460
 Timmerman, H. P., 408
 Tittemore, J. N., 1607, 1663
 Titus, H. D., 1119
 Titus, H. J., 552, 1498
 Todd, A. B., 1025
 Tolliver, C. W., 887
 Toltz, Max, 407
 Toney, M. B., 599
 Tooker, H. B., 599
 Toppan, W. R., 928
 Tourtelot, F. J., 552
 Tower, M. J. L., 830
 Towner, M. E., 504
 Townsley, L. E., 1025, 1073
 Tracy, W. L., 887, 888
 Trimble, Chas. H., 646, 739
 Troup, A. G., 837
 Trout, G. W., 1273, 1321
 Trum, E. G., 455, 598
 Tucker, Carl, 453
 Tull, William W., 739
 Turlington, O. C., 1372
 Turnell, C. A., 1557
 Turner, Alex, 107*
 Turner, C. D., 408
 Turner, C. N., 1273, 1459
 Turner, E. A., 1119
 Tutt, F. K., 1321
 Tyler, C. B., 207
 Tyler, R. D., 691
 Ullrich, L. C., 1663
 Upton, William, 1320
 Upton, W. H., 207
 Uren, W. J., 598, 1606
 Vail, F. B., 1268
 Vanderslice, G. W., 94
 Van Horne, F. P., 782
 Van Horn, R. S., 1367
 Van Houten, R. A., 46
 Van Skite, C. B., 1499
 Van Tassel, E. S., 1119
 Van Valen, H. D., 1663
 Vasey, E. J., 1372
 Vaughan, H. A., 886
 Vaughan, H. H., 343*
 Viersen, L. J., 783, 1667
 Vincent, W. W., 692
 Vinson, A. W., 500
 Vogel, H. F., 453
 Voges, Richard, 734
 Vollman, John, 552
 Votaw, J. E., 837
 Vuncannon, T. P., 692
 Wade, A. J., 1372
 Wagatha, A., 1505
 Wagenhorst, Otto F., 45
 Wagner, Benjamin, 1073
 Wagner, D. G., 1371
 Wagstaff, George, 734, 739, 884
 Walbank, R. T., 106*, 1464*
 Waldo, Frank O., 1272
 Waldron, Holman, D., 45
 Walkem, H. B., 456
 Walker, Arthur L., 202
 Walker, J. L., 1565
 Wall, T. J., 552, 692
 Wallace, A. E., 1073
 Wallace, J. B., 1498, 1662
 Wallace, J. H., 504
 Wallace, W. L., 1607
 Waller, J. A., 1025
 Wallingford, H. V., 887
 Walsh, Frank A., 207
 Walsh, John T., 207
 Walsh, M., 1073
 Walsh, Martin, 1320, 1459
 Walsh, W. H., 1174
 Walter, C. H., 1225, 1273
 Ward, E. H., 783, 1667
 Ward, J. E., 1219
 Ward, J. H., 1367
 Ward, M. L., 1558
 Warner, J. M., 552
 Warner, R. M., 598, 1320
 Warner, W. P., 979, 1025
 Warren, J. B., 93
 Warrington, F. S., 207
 Wasson, H. W., 1073
 Watchall, Walter, 786
 Waterbury, R. R., 786
 Waters, J. J., 456
 Watson, J. S., 44
 Watts, H. E., 837
 Watts, H. W., 94
 Watson, W. S., 598
 Weatherly, R. H., 107*
 Weaver, R. W., 1174
 Webb, R. B., 786, 887
 Weber, C. E., 1663
 Weber, R. K., 201
 Webster, J. H., 45
 Weeks, I. S. P., 1372
 Weeks, Otis, 692
 Weidenhamer, W. M., 1607
 Weinland, C. F., 1118
 Weir, H. D., 1120
 Welby, A. E., 1024, 1173*
 Welch, E. C., 979
 Welch, J., 646
 Welch, W. C., 1606
 Welles, F. R., 1316
 Weller, James E., 504, 739, 786
 Wellcock, A. T., 1320
 Werner, J. A., 453
 Wertheim, S., 1024
 West, A., 1607
 West, J. L., 45, 408
 Westinghouse, George, 1566
 Wetmore, G. L., 1120
 Whalen, W. H., 552, 598, 785*, 1119
 Wharton, R. C., 739
 Wheaton, W. S., 1073
 Wheeler, W. B., 207
 Whifford, J. H., 1025
 Whipple, A. L., 92, 107*
 White, R. C., 979
 White, T. P., 837
 Whitford, J. M., 1119
 Whitney, C. D., 646
 Whittaker, W. H., 1417
 Whittington, A. G., 1174, 1272
 Wickersham, Clarence, 1499
 Wickersham, Geo. W., 1073
 Wicks, Geo. E., 1119
 Wiegand, C. H., 740
 Wiggin, V. V., 646
 Wight, R. C., 503
 Wilburn, C. B., 1557
 Wilcox, S. M., 646
 Wilcutt, J. L., 1606
 Wilgres, H. T., 786
 Wilkes, W. C., 1074
 Wilkens, W. B., 1371
 Wilkinson, F. M., 1607
 Willard, F. E., 646
 Williams, A. F., 207
 Williams, C. B., 838
 Williams, C. C., 646
 Williams, C. T., 598, 646
 Williams, G. A., 1267
 Williams, G. D., 1557
 Williams, G. P., 94
 Williams, I. E., 207
 Williams, John W., 646, 739
 Williams, O. M., 1073
 Williams, Riley, 887
 Williams, R. B., 45
 Williams, S. A., 1074
 Williams, T. H., 455, 646
 Willis, W. H., 739
 Willis, W. H., 455
 Willis, Reuben W., 552

RAILROAD CONSTRUCTION—Continued

Des Moines & Sioux City (Electric), 1373
 Des Moines, Council Bluffs & Omaha (Electric), 1027
 Des Moines, Council Bluffs & Western, 980
 Des Moines & Sioux City, 600, 932
 Detroit, Flint & Saginaw, 839
 Dinwiddie & Gary, 741
 Durham & Charlotte, 741
 Duluth & Iron Range, 1559
 Duluth & Northeastern, 457
 Duluth & Northern Minnesota, 1559
 Duluth, Missabe & Northern, 208
 Durham & Charlotte, 1664
 Dyersburg-Northern, 1500

Eagle Valley, 208, 1373
 Eastern British Columbia, 95
 Edmonton, Yukon & Pacific, 693
 Eldorado, Marion & Southwestern, 1559
 Elkin Electric, 47
 El Paso & Kansas City Short Line, 505
 El Paso & Southwestern, 47, 505
 El Reno & Interurban, 600
 El Reno & Western, 1559
 El Reno, Red River & Pacific, 208, 1176
 Empire Railway, Mining & Milling Co., 741
 Enid, Ochiltree & Western, 980, 1664
 Erie, 1176, 1274, 1418, 1608
 Erie & Jersey, 1274
 Esquimalt & Nanaimo, 95, 554, 600, 1121, 1559
 Estacado & Gulf, 208, 505, 932, 1121
 Evansville & Eastern Railway, 933
 Evansville & Southern, 1274
 Evansville, Mt. Carmel & Olney (Electric), 1419, 1559

Fairburn & Atlanta Railway & Electric Company, 1419
 Ferdinand Railroad, 788
 Flag River, 1227
 Florida East Coast, 788, 1608
 Fort Worth, McKinney & Bonham, 788
 Fort Worth, Weatherford & Mineral Wells Interurban, 1121
 Fort Smith & Western, 208, 1176, 1559
 Fort Wayne & Springfield (Electric), 208
 Franklin & Abbeville, 1500
 Gainesville, Whitesboro & Sherman Interurban, 788
 Galatia, Harrisburg & Southeastern, 693
 Galesburg, Aledo & North Western, 980, 1027
 Galatlin-Pike Railway, 554
 Galveston & Houston Interurban, 647
 Gary & Southern Traction, 208
 Gary Hobert (Electric), 208
 Genesee & Orleans (Electric), 933
 Genesee River Railroad, 1608
 Georgia & Florida, 788, 839, 1176, 1373
 Georgia Roads (Electric), 647
 Georgia Southwestern & Gulf, 600, 1075, 1176
 Gideon & North Island, 209
 Gila Valley, Gobe & Northern, 1460
 Glenville & Kanawha, 95
 Goose Lake & Southern, 409
 Gould Southwestern, 600
 Graham, Roswell & Western, 1027, 1373
 Grand Rapids & Northwestern, 457, 933
 Grand Trunk, 693, 933
 Grand Trunk Pacific, 409, 457, 505, 554, 600, 647, 740, 788, 888, 933, 980, 1027, 1121, 1227, 1373, 1500, 1559, 1664
 Great Northern, 95, 647, 933, 981, 1027, 1075, 1176, 1227, 1374, 1500, 1559, 1608
 Greenville & Knoxville, 1608
 Gulf Coast Traction, 1274
 Gulf, Colorado & Santa Fe, 505, 693, 1374
 Gulf & Magnolia, 1121
 Gulf & Ship Island, 1227
 Gulf, Texas & Western, 1374
 Guthrie & Interurban (Electric), 409

Ha Ha Bay, 741
 Halifax & Guysborough, 1027
 Hancock & East Branch, 95
 Harriman Lines, 505
 Harrisburg & Ohio River, 647
 Harrison & Mineral Belt, 1460
 Harrisville & Cornwallis, 95
 Helena, Parkin & Northern, 1559, 1664
 Hobart Motor Railroad, 1027
 Houghton County Street Railway, 888
 Houston & Brazos Valley, 209, 1608
 Hudson & Manhattan, 209, 889, 1274
 Huron & Ontario, 1664

Idaho & Washington Northern, 457, 788, 1121, 1560
 Idaho Northern, 409, 741, 1176
 Idaho Railway & Navigation, 889, 981
 Illinois Central, 647, 788, 1075
 Illinois Traction, 1560
 Ilwaco Railway & Navigation, 554
 Indiana Roads (Electric), 1075
 Indianapolis, Cloverdale & Terre Haute Traction, 209
 Indianapolis, New Castle & Toledo (Electric), 788
 Indian Creek Valley, 1500
 Interborough Rapid Transit, 209
 Inter-California, 1608
 Intercolonial, 693, 788, 839, 1121
 International Lumber Company's Road, 457
 International of New Brunswick, 409, 1176, 1608

Interoceanic of Mexico, 409
 Interstate Railway & Power Co., 741
 Iowa & Omaha Short Line, 889, 1374, 1419
 Iowa Interstate, 839

Joplin & Eastern, 47
 Joplin & Pittsburgh (Electric), 209
 Joplin Union Depot Co., 457

Kansas City, Mexico & Orient, 409, 457, 693, 741, 839, 889, 1121, 1176, 1321, 1374, 1608
 Kansas City, Ozarks & Southern (Electric), 209, 505, 693, 1274

Kansas City, Paris & Gulf, 1500
 Kansas City Southeastern (Electric), 554
 Kansas City Union Trust Co., 741
 Kansas-Colorado (Electric), 47, 457, 693, 741
 Kansas Southern & Gulf, 47, 933, 1500
 Kearney & Loup Valley, 1374
 Kentucky & Ohio River (Electric), 209, 600
 Kentucky Midland, 1560
 Kentwood & Eastern, 47
 Kettle Valley, 1609
 Keweenaw Central, 554, 933, 1560
 Kiowa, Hardtner & Pacific, 693
 Knoxville, Sevierville & Eastern, 95, 554
 Kokomo, Frankfort & Terre Haute Traction, 47
 Kokomo Western Transportation Co., 1560

Lac Suel, Rat Portage & Keewatin, 600
 La Dicha & Pacific, 457

Lake Charles Railway & Navigation Co., 741
 Lake Erie & Pittsburgh, 1560
 Lake Erie & Youngstown (Electric), 1374
 Lake Shore & Michigan Southern, 1560
 Lake Superior & Ishpeming, 1460
 Lake View Traction, 741
 Laramie, Hahn's Peak & Pacific, 600, 889, 1560
 Lawton, Wichita, Falls & Northwestern, 409, 1176
 Lehigh Valley, 1075
 Lexington & Eastern, 600
 Lima & Toledo Traction, 933
 Live Oak, Perry & Gulf, 1560
 Logansport, Frankford & Indianapolis Traction, 933
 Logansport-Marion (Electric), 554
 Long Island, 457, 1560, 1609
 Lorain, Ashland & Southern, 555
 Louisville & Atlantic, 209
 Louisville & Eastern (Electric), 981
 Louisville & Nashville, 741, 1419, 1609
 Lynnhaven Terminal Corporation, 1419

Mackenzie River Power & Railway Co., 1275
 Madison Southern, 788
 Mansfield Railway & Transportation Co., 505
 Marianna, Aubrey & Western, 1227, 1275
 Maritime Coal, Railway & Power Co., 1609
 Marshall & Texas, 839, 933, 1374
 Marshall & East Texas, 1560
 Matane & Gaspe, 741, 839, 1121, 1176, 1275
 Memphis & Chattanooga, 693
 Memphis, Paris & Gulf, 788, 1028, 1075
 Meridian & Southwestern, 981
 Mesa Valley & El Paso (Electric), 457, 555
 Meto Valley Railroad, 1419, 1609
 Metropolitan Southern, 601
 Mexican Central, 409, 647, 1028, 1418, 1560
 Mexican International, 209
 Mexican Pacific Coast Line, 1664
 Mexican Roads, 409, 457, 788, 1028, 1176, 1322, 1664
 Mexican Southern, 1560
 Mexico, Santa Fe & Perry Traction, 1560
 Midland Valley Railroad, 981
 Midway & Vernon, 1177
 Milwaukee & Fox River Valley (Electric), 1560
 Milwaukee Light, Heat & Traction, 555, 788, 1177, 1560
 Milwaukee Northern (Electric), 555, 1075, 1177
 Milwaukee Western Electric, 1609
 Mineral Belt, 981
 Minneapolis & St. Louis, 47
 Minnesota Air Line, 505
 Minneapolis, St. Paul & Sault Ste. Marie, 601, 1028, 1121
 Mississippi Central, 209
 Mississippi River Western, 933, 1075
 Mississippi Roads, 1419
 Missouri & Kansas Interurban, 788
 Missouri & North Arkansas, 209, 505, 1609
 Missouri, Arkansas & Southwestern, 889, 1177
 Missouri, Kansas & Texas, 95, 933, 1075, 1121
 Missouri, Oklahoma & Gulf, 47, 409, 457
 Missouri Pacific, 1609
 Missouri River & Northwestern, 1076
 Missouri Southern, 1500
 Missouri, Tennessee & Alabama, 647
 Monroe, Farmersville & Hope, 889, 933
 Montana Roads (Electric), 1177
 Montana, Wyoming & Southern, 1227
 Montreal & Southern Counties, 1374
 Morgan's, Louisiana & Texas, 1121
 Mountain Valley & Plains, 889
 Narrows Terminal Belt, 555
 Nashville, Chattanooga & St. Louis, 1177
 Nashville & Huntsville, 95, 209, 601, 693, 788
 Nashville & Louisburg, 555

Natchez, Columbia & Mobile, 1560
 Nebraska, Kansas & Southern, 839
 Nebraska Traction & Power Co., 1177, 1275
 Nebraska Roads, 409
 Nevada & California, 1609
 Nevada-California-Oregon, 693, 1560
 Nevada Roads, 457
 Nevada Northern, 1374
 New Jersey Rapid Transit, 981
 New Orleans Great Northern, 1177
 New Orleans, Mobile & Jackson, 209
 New Orleans, Natalbany & Natchez, 1177
 New Orleans Public Belt, 209, 981
 New York & North Shore Traction, 1076
 New York Central & Hudson River, 95
 New York, New Haven & Hartford, 555, 601, 788, 933, 1177, 1275, 1419, 1609
 New York Subways, 693
 New York, Westchester & Boston, 1121, 1177, 1609
 Nezperce & Idaho, 505, 889, 981, 1177, 1418
 Niagara, St. Catherines & Toronto, 209, 457
 Niangua & Western, 1227
 Norfolk & Southern, 1275
 Norfolk & Western, 209, 741, 981
 Norfolk Dock & Terminal, 1419
 North & South Carolina, 1560
 North Carolina Roads, 1121
 North Coast, 741, 889, 1460
 Northeastern (Electric) 457
 Northern Dakota, 47
 Northern Minnesota, 555
 Northern Pacific, 555, 647, 889, 1121, 1227, 1419, 1500, 1560
 North Jersey Rapid Transit Co., 788, 933
 Northwestern Oklahoma Development Co., 1227
 Northwestern Pacific, 1419, 1500
 Northwestern Railroad, 1609
 Norwood & St. Lawrence, 1609
 Ocean Shore (Electric) 555, 741, 889, 1419, 1501
 Ochiltree, Enid & Southwestern, 1374
 Ociilla Southern, 1374, 1560
 Ohio Electric, 933, 1276
 Ohio Roads, 1419
 Oil Belt Traction, 693
 Okanogan Electric, 1227, 1276
 Oklahoma, Beaver & Western, 505
 Oklahoma Central, 555
 Oklahoma City, El Reno Electric Interurban, 839
 Oklahoma, Kansas & Missouri Interurban, 1076
 Oklahoma Mexico & Pacific, 1227
 Oklahoma Roads, 981
 Omaha, Council Bluffs & Des Moines, 933
 Omaha, Lincoln & Beatrice (Electric) 1177
 Omaha, Lincoln & Southwestern, 1177
 Ontario Roads, 1276
 Ontario & San Antonio Heights (Electric) 1227
 Oregon & Washington, 981, 1419, 1460, 1560
 Oregon Electric, 1560
 Oregon Interurban, 96, 505
 Oregon Midland, 1227
 Oregon Railroad, 601
 Oregon Railroad & Navigation Co., 555, 647, 981, 1121, 1374*, 1460
 Oregon Short Line, 555, 889, 1609
 Oregon, Washington & Idaho, 1501
 Oshkosh, Winneconne & Waupaca, 96
 Ouachita Valley Construction, 647

Pacific & Idaho Northern, 933
 Pacific Railway & Navigation, 933
 Pacific & South-Eastern, 1276
 Pan-American, 693, 889
 Parral & Durango, 209, 457, 647, 1322
 Penhorn Creek Railroad, 1609
 Peninsular Railroad, 1609
 Pennsylvania, 209, 555, 693, 788, 1076
 Pennsylvania Lines West, 1419
 Pennsylvania Roads (Electric) 934, 1322
 Peoria & Galesburg, 1560
 Philadelphia & Reading, 786
 Philadelphia Terminal Transfer, 47
 Pittsburgh & Lake Erie, 1419
 Pittsburgh, Binghamton & Eastern, 693, 789, 981
 Pittsburgh, Shawmut & Northern, 934
 Port Angeles Railway & Terminal, 1177
 Port Arthur & Houston Short Line, 457, 505
 Port Jervis & Delaware Valley, 1560
 Potomac Valley, 789
 Prince Edward Island, 1177, 1227
 Puget Sound (Electric) 555

Quanah & El Paso, 889
 Quebec & Lake St. John, 1028
 Quebec Central, 1177, 1501
 Quebec, Montreal & Southern, 1609
 Quitman & Great Northern, 839, 1227, 1501

Rapid City & Wyoming Valley, 1076
 Raymondville & Waddington, 1609
 Redlands & Yucaipa (Elec.), 601
 Regina Interurban Radial (Electric), 1609
 Register & Rocky Ford, 1227
 Richmond, Urbana & Peninsular (Electric), 1322
 Rio Grande, Sierra Madre & Pacific, 409, 789
 Roanoke & Bent Mountain (Electric) 1374

Roaring Fork, 1501
 Rochester-Corning-Elmira Traction, 839
 Rochester, Syracuse & Eastern (Pacific) 1028
 Rock Island Southern (Electric), 1121
 Rockport, Langdon & Northern, 647
 Rogue River & Oregon Southern, 934
 Rome & Osceola, 741
 Roscoe, Snyder & Pacific, 1028, 1374, 1560
 Ruston, Natchitoches & Northeastern, 1561

St. Francis & Southwestern, 839
 St. Joseph & Grand Island, 209
 St. Louis & Illinois Belt, 1609
 St. Louis & Oklahoma Southern, 789, 981
 St. Louis & San Francisco, 647, 839, 1028, 1374
 St. Louis & Sr. Libby, 1227
 St. Louis, Bartlesville & Pacific, 96, 693
 St. Louis, Brownsville & Mexico, 839, 1609
 St. Louis, Iron Mountain & Southern, 693
 St. Louis, San Francisco & Texas, 1374
 St. Louis Southwestern, 1276
 St. Mary's & Kingsland, 1501
 St. Mary's & Western Ontario, 1664
 St. Maurice Valley, 1609
 St. Paul Bridge & Terminal Railway, 1276, 1374
 Sabine Valley, 209
 Sacramento Southern, 1609
 Salem, Falls City & Western, 693
 Salem, Winona & Southern, 96
 Saline County Traction, 981
 Salt Lake & Ogden, 694, 789, 1227
 San Antonio & Rio Grande, 1609
 San Antonio, Chapin & Rio Grande Valley, 981, 1374
 San Diego, El Paso & St. Louis, 1374, 1561
 Sanford & Everglades, 789
 San Rafael & Atlixo, 457
 Santa Fe, Liberal & Englewood, 981, 1561
 Sannoy Valley Railroad Co., 555, 1076, 1177, 1227, 1561
 Saratoga & Encampment, 209
 Savannah, Augusta & Northern, 1028, 1561
 Savannah Valley, 741, 1322
 Schenectady & Margaretville, 96
 Seattle Electric, 1076
 Seattle-Everett Interurban, 1076
 Sewall Valley, 1374
 Shawnee Central, 555
 Shearhouse Lumber Co., 982
 Shreveport Northeastern, 1276, 1419
 Sioux City & Des Moines (Electric), 410, 890, 1177
 Sioux City & Spirit Lake, 889, 1177
 South Dakota Central, 209
 Southern, 694, 789, 1177, 1374, 1460

Southern Pacific, 47, 96, 410, 555, 647, 694, 741, 789, 982, 1122, 1460, 1561, 1610, 1664
 Southern Pacific Co. of Mexico, 96, 601, 889
 Southern Railroad of Texas, 505
 Southern Utah, 96, 982, 1561
 Southern Wisconsin (Electric), 1419
 Southwestern Interurban of Mangum, 1374
 Sparks Western, 789
 Sparta-Melrose Electric Railway & Power Co., 457, 601, 1177
 Spokane, Columbia & Western (Electric), 982
 Spokane & Inland (Electric), 209, 982
 Spokane & Inland Empire (Electric), 1322, 1561
 Spokane, Portland & Seattle, 505, 647, 1374, 1501, 1561
 Springfield & Jackson (Electric), 1322
 Stamford & Northwestern, 1419
 Stephenville, North & South Texas, 1028, 1227
 Sterling Trust Co., The, 982
 Sugar Creek & Northern, 1610*
 Sumpter Valley, 890
 Sunset Western, 1610
 Suwanee River Railway & Power Co., 1375
 Syracuse, Lake Shore & Northern (Electric), 1028
 Tampa Northern, 789
 Taylorville-Nokomis Traction, 1610
 Terminal Railroad Ass'n of St. Louis, 934
 Temiskaming & Northern Ontario, 694
 Texas & New Orleans, 647, 789, 934, 982
 Texas & Pacific, 1227, 1375
 Texas Roads, 555, 601, 694, 789, 982, 1276, 1375, 1561
 Texas Roads (Electric), 1228
 Texas Southern, 741, 839, 934
 Texas Southeastern, 1419
 Texas State Railroad, 1076, 1375
 Texas Union Traction, 741
 Thessalon & Northern, 601
 Thompson Run Coal & Railroad, 1501
 Thunder Creek Transportation & Smelting Co., 839, 982
 Topeka & Northwestern, 1664
 Topeka-Southwestern, 1610
 Torres, Prietas & Represo, 1561
 Tuscarora Valley, 1501
 Twin Cities & Lake Superior, 47
 Uintah Railroad, 1501
 Union Central, 505
 Union Pacific, 209, 505, 741, 789, 1276, 1561, 1664

Union Terminal Railway (St. Joseph, Mo.), 1501
 Union Traction (Electric), 209
 Utah Copper Co., 1322
 Valdez-Yukon, 1028
 Vancouver Island & Eastern, 647
 Vancouver, Victoria & Eastern, 1028, 1375, 1610
 Vancouver, Westminster & Yukon, 648
 Victor & Eastern, 555
 Victoria & Barclay Sound, 1561
 Vincennes, Centralia & St. Louis Transit, 410
 Virginia Air Line, 1122
 Virginia & Carolina Southern, 48, 96
 Virginian Railway, 648, 1177, 1461
 Virginia Roads, 789
 Waco, Hamilton & Brownwood, 789
 Wasco County Electric & Power Co., 601, 839
 Walkerton & Lucknow, 934
 Washington & Western Maryland, 601
 Washington, Fredericksburg & Gettysburg (Electric), 209
 Washington-Pittsburgh Terminal, 601
 Washington Water Power Co., 890
 Washington, Westminster & Gettysburg, 555
 Wasiota & Black Mountain, 741, 934
 Watauga Railroad, 505
 Weaverville Electric Co., 555, 741
 Wenatchee Valley & Northern, 209
 Western & Atlantic, 1177
 Western Central, 890
 Western Pacific, 48, 601, 1276, 1375, 1419, 1610
 Western Railways & Light Co., 1076
 West Side Belt, 601
 West Virginia Connecting, 1028
 Wheeling & Lake Erie, 741, 1610*
 Wichita Falls & Northwestern, 209, 934, 1028, 1177
 Wichita Falls & Southern, 934
 Williamsport & North Branch, 1501
 Winnebago Traction Co., 1228
 Winona Interurban, 1322
 Wisconsin Central, 1561
 Wisconsin Electric, 1228, 1561
 Wisconsin & Northern, 1076, 1228
 Wisconsin & Northeastern, 96
 Wisconsin Roads, 1177
 Wyoming & Southwestern, 457
 Yorkton Southern, 48, 210
 York Railways, 982

RAILROAD FINANCIAL NOTES.

Albuquerque Eastern, 890
 Alberta Railway & Irrigation, 1420
 Alberta Railway & Navigation Co., 1178
 Apalachicola Northern, 1178
 Atchison, Topeka & Santa Fe, 556, 742, 840, 890
 Atlanta, Birmingham & Atlantic, 506, 982
 Atlantic & Lake Superior, 601, 982
 Atlantic City & Suburban, 1420
 Atlantic Coast Line, 648
 Baltimore & Ohio, 410, 506, 556, 1420
 Baltimore, Chesapeake & Atlantic, 601
 Bangor & Aroostook, 1276
 Boston & Albany, 96, 1376
 Boston & Maine, 48, 210, 694, 934, 982, 1122, 1178, 1610
 Boston & Suburban Electric, 742
 Boston & Worcester Electric, 1664
 Boston Elevated, 1420, 1461, 1664
 Boston Terminal, 648
 British Yukon Railway, 210
 Brooklyn Rapid Transit, 601
 Buffalo, Rochester & Pittsburg, 648, 789
 Bullfrog Goldfield R. R., 556
 Calumet & South Chicago, 648
 Canadian Northern, 556, 742, 840, 1076, 1322, 1610
 Canadian Pacific, 984, 982, 1028, 1122, 1178
 Cane Belt, 556
 Carolina, Clinchfield & Ohio, 789, 1664
 Central of Georgia, 210, 789, 982, 1178
 Central New England, 648
 Central of Oregon, 1376
 Central Pacific, 648
 Central Park, North & East River, 742, 1228
 Central Vermont, 1420
 Chesapeake & Ohio, 601, 1610, 1664
 Chicago & Alton, 210, 1122, 1178, 1376
 Chicago & Milwaukee Electric, 556, 648, 1376, 1501
 Chicago & North-Western, 1076
 Chicago & Western Indiana, 1665
 Chicago, Burlington & Quincy, 458, 982, 1376, 1865
 Chicago, Cincinnati & Louisville, 48, 1376
 Chicago City Railway, 1501
 Chicago, Consolidated Traction, 48, 458, 601, 742, 789, 1420
 Chicago Great Western, 410, 694, 1028, 1501
 Chicago, Milwaukee & St. Paul, 410, 556
 Chicago, Ottawa & Peoria (Electric), 1076
 Chicago Railway Company, 210, 742

Chicago Railways, 1376, 1501
 Chicago, Rock Island & Pacific, 789, 934, 1276, 1561
 Chicago Southern, 506, 890
 Chicago Subway, 601
 Chicago Terminal Transfer, 1228, 1501
 Cincinnati, Bluffington & Chicago, 1122
 Chicago, Findlay & Wayne, 1376
 Cincinnati, Hamilton & Dayton, 458, 506, 601, 648, 840, 1376
 Cincinnati, Indianapolis & Western, 506
 Cincinnati, New Orleans & Texas Pacific, 96
 Chesapeake & Ohio, 1228
 Clarksville Street Railway & Light Co., 602
 Cleveland, Cincinnati, Chicago & St. Louis, 410, 602
 Cleveland, Painesville & Eastern (Electric), 410
 Cleveland Street Railway, 1322, 1420
 Colorado & Southern, 1228, 1322, 1420, 1461
 Coney Island & Brooklyn Railway, 1376
 Cornwall & Lebanon, 742
 Cripple Creek Central, 742, 1502
 Delaware & Hudson, 96, 742, 1665
 Delaware, Lackawanna & Western, 1502
 Denver & Rio Grande, 210, 410, 648, 694, 840, 982, 1028, 1502
 Denver City Tramway, 934
 Denver, Laramie & Northwestern, 1561
 Des Moines, Iowa Falls & Northern, 602
 Detroit, Toledo & Ironton, 48, 458, 602, 694, 890, 1376, 1420, 1561
 Duluth, Rainy Lake & Winnipeg, 1610
 Erie, 96, 210, 458, 694, 790, 934, 1228, 1420, 1502, 1561
 Fairmont & Clarkson Traction, 840
 Fitchburg Railroad, 1122
 Fort Dodge, Des Moines & Southern, 1502
 Fulton Street Railway, 602
 Galveston Terminal Railway, 410, 506
 Georgia Railroad & Banking Co., 648
 Grand Rapids & Northwestern, 458
 Grand Trunk, 789, 1420
 Great Northern, 458, 556, 694
 Gulf & Chicago, 96, 982
 Gulf & Ship Island, 1178
 Havana Central, 506
 Hocking Valley, 1178
 Honduras Railroad, 694
 Houston Belt & Terminal, 1420

Hudson Companies, 210, 458, 1178, 1322
 Huntington & Broad Top Mountain Railroad & Coal, 602
 Illinois Central, 96, 458, 1276, 1420
 Illinois Tunnel Co., 602
 Indianapolis, Decatur & Western, 506
 Interborough Rapid Transit, 1561
 International & Great Northern, 210, 602, 648, 840, 1376
 Interoceanic of Mexico, 1322
 Interstate Railways, 934
 Ione & Eastern, 890
 Joplin Union Depot Co., 458
 Kansas City Belt Line, 1228
 Kansas City, Mexico & Orient, 1228, 1461
 Kansas City Railway & Light, 506
 Kansas City Terminal, 1228
 Keokuk & Des Moines, 506
 Lake Erie & Western, 410
 Lake Shore & Michigan Southern, 648
 Leavenworth, Kansas & Western, 410
 Lehigh & New England, 210
 Lehigh Valley, 1665
 London Underground Electric, 790
 Lorain & West Virginia, 1322
 Los Angeles & Redondo, 790
 Los Angeles Pacific (Electric), 1461
 Louisville & Eastern (Electric), 1122
 Louisville & Nashville, 210, 410, 648
 Maine Central, 1276
 Manhattan Railway, 210, 458, 694
 Manila Railroad, 602
 Marshall & East Texas, 840
 Metropolitan Street Railway, 556, 742, 890, 1076, 1178, 1228, 1376, 1420, 1610
 Mexican Central Railway, 48, 790, 890, 934
 Michigan United Railways, 602, 694
 Minneapolis, St. Paul & Sault Ste. Marie, 982
 Missouri Electric, 840
 Missouri Kansas Interurban, 210
 Missouri Pacific, 96
 Missouri River & Northwestern, 96, 556, 648, 1076
 Mobile & Ohio, 458
 Mobile, Jackson & Kansas City, 96, 982
 Mohawk Valley, 694
 Municipal Traction, 790, 982, 1122, 1178

RAILROAD FINANCIAL NOTES—Continued

Municipal Traction (Cleveland), 506, 648, 1276, 1322, 1420

Nashville, Chattanooga & St. Louis, 556, 602

Nashville Railway & Light, 410

National Railroad of Mexico, 742, 1502

National Railways of Mexico, 48, 458, 742, 890, 1122

New Brunswick Railway, 982

New Mexican Central, 934

New Orleans, Fort Jackson & Grand Isle, 1178, 1610

New Orleans, Mobile & Chicago, 96, 982

New Orleans Railway & Light Co., 506

New Orleans Southern, 1178

Newport, Wickford Steamboat & Railroad, 1122

Newton & Northwestern, 1461, 1502

New York Central & Hudson River, 96, 210, 790, 1376

New York City Interborough Railways, 694

New York City Railway, 48, 410, 458, 506, 556, 602, 742, 790, 982, 1076

New York, Chicago & St. Louis, 48

New York, New Haven & Hartford, 48, 210, 410, 458, 506, 556, 602, 694, 790, 840, 1076, 1122, 1178, 1376

Niagara, St. Catharines & Toronto, 556

Norfolk & Ocean View, 96

Norfolk & Southern, 506, 890, 934, 1178, 1276, 1322, 1561

Norfolk & Western, 742, 1178

Northern Ohio Traction & Light, 890

Northern Pacific, 556, 1376

Oklahoma Central, 48, 96

Oneonta & Mohawk Valley (Elec.), 210

Oregon Railroad & Navigation Co., 1561

Oregon Short Line, 48

Pennsylvania, 602, 1502, 1665

Pennsylvania Lines West, 96, 458

Pere Marquette, 48, 1420

Philadelphia & Reading, 210

Philadelphia, Baltimore & Washington, 648, 790, 1665

Philadelphia, Bristol & Trenton (Electric), 1228

Philadelphia Rapid Transit Co., 410, 458, 934, 1028, 1228, 1420

Philippine Railway, 790, 1420

Pittsburg & Castle Channon, 694

Pittsburg & Lake Erie, 648, 1376

Pittsburg, Binghamton & Eastern, 648

Pittsburgh, Cincinnati, Chicago & St. Louis, 96, 410

Pittsburgh, Shawmut & Northern, 1076

Pontiac, Oxford & Northern, 840, 890, 1076

Puget Sound International Railway & Power Co., 1228

Quebec Bridge & Railway, 840

Rapid City & Wyoming Valley, 1076, 1178

Reading Company, 1502

Rio Grande Western, 410, 648

Rochester & Eastern Rapid Railway, 694

Rock Island, Arkansas & Louisiana, 790

Rock Island-Frisco Terminal, 1376

Rutland Railroad, 1122

St. Joseph Belt Railway, 602

St. Joseph & Grand Isle, 1228

St. Louis & San Francisco, 790, 840, 1122, 1178, 1502

St. Louis, Brownsville & Mexico, 1178

St. Louis Transit Co., 1610

St. Paul & Des Moines, 506, 602, 890

Santa Clara & Interurban, 790, 890

Santa Fe Central, 934

Scioto Valley Traction, 840, 934

Seaboard Air Line, 410, 694, 790, 934, 1276, 1610, 1665

Seattle Electric, 506

Seattle-Everett Interurban, 1228

Second Avenue Elevated (New York), 742, 890, 1028, 1076, 1178, 1228, 1376

Sierra Madre & Pacific, 1076

South Dakota Central, 210, 602

Southern Indiana, 694, 790, 840, 890, 934, 982, 1122, 1322, 1376

Southern Pacific, 602, 890, 1178, 1376, 1461

Southern Railway, 458, 1178

Spokane, Portland & Seattle, 410

Tacoma Eastern, 556

Tampa Northern, 1122

Tarrytown, White Plains & Mamaroneck (Electric), 840, 934, 1420

Tennessee Central, 458

Terminal Railroad Association of St. Louis, 506

Texas Central, 210

Texas Southern 556, 742, 840

Third Ave. Railroad, 1122

Toledo & Ohio Central, 1178

Toledo Railways & Light, 458

Toledo, St. Louis & Western, 1376

Tonopah & Tidewater Co., 556

Twenty-eighth and Twenty-ninth Street Cross-town (New York), 1076

Underground Electric of London, 602, 742

Union Pacific, 96, 410, 602, 790, 890, 1228, 1376

Union Traction (Indiana), 742

Union Traction Co. of Philadelphia, 1322

United Railroads of Yucatan, 602

United Railways of St. Louis, 1610

Vancouver, Victoria & Eastern, 694

Vancouver, Westminster & Yukon, 694

Vandalia, 210

Vera Cruz & Pacific, 742

Vera Cruz Terminal, 506

Virginia & Carolina Southern, 48

Virginia & Southwestern, 556, 1665

Virginian Railway, 1228, 1322, 1610

Virginia Passenger & Power Co., 694, 742, 982

Wabash, 458, 648, 934, 1178

Wabash-Pittsburgh Terminal, 48, 556, 604, 742, 790, 840, 890, 934, 1276, 1322

Washington, Arlington & Falls Church (Elec.), 648

Washington, Baltimore & Annapolis (Electric), 1228

Washington Water Power Co., 1562

Western Maryland, 96, 210, 506, 1122

Western Pacific, 506, 1028

West Penn Railways (Electric), 210

West Side Belt, 410

Wheeling & Lake Erie, 96, 506, 602, 694, 742, 934, 1028, 1122, 1322, 1420, 1502

White Pass & Yukon, 1502

Wichita Falls & Southern, 1228

Winnebago Traction, 742

Wisconsin Central, 840, 1178, 1562

Wisconsin Electric, 840

Worcester Consolidated Street Railway, 210

York (Pa.) Railways, 506



